

# RHODE ISLAND STANDARD DETAILS INDEX

<b><u>New No. (Old No.)</u></b>	<b><u>Title</u></b>
1.1.0 (1.1)	Underdrain
1.2.0 (1.2)	Combination Drain
1.3.0 (1.4)	Concrete Connecting Collar
2.1.0 (2.1)	Concrete Headwalls for Pipe Culverts
2.2.0A (2.2)	Standard Headwalls for Multiple 3'-6" to 7'-0" Pipe Culverts (Sheet 1 of 2)
2.2.0B (2.21)	Standard Headwalls for Multiple 3'-6" to 7'-0" Pipe Culverts (Sheet 2 of 2)
2.3.0 (2.6)	Precast Concrete Flared End Section
3.2.0 (3.1)	Brick/Solid Block 4'-0" Round Manhole
3.2.1 (3.2)	Brick/Solid Block 5'-0" or 6'-0" Round Manhole
3.2.2	Solid Block Shallow 4'-0" or 5'-0" Round Manhole
3.3.0 (4.2)	Brick/Solid Block Type "D" Square Catch Basin
3.3.1 (4.9)	Brick/Solid Block Driveway Basin and Gutter Inlet
3.3.2 (4.4)	Brick/Solid Block Type "F" Square Catch Basin
3.3.3 (4.71)	Solid Block Flush Square Catch Basin
3.3.4 (4.16)	Brick/Solid Block Double Grate Catch Basin Grate Parallel to Edge of Pavement
3.3.5 (4.17)	Brick/Solid Block Double Grate Catch Basin Grate Perpendicular to Edge of Pavement
3.3.6A (4.18)	High Capacity Inlet (Sheet 1 of 2)
3.3.6B (4.18)	High Capacity Inlet (Sheet 2 of 2)
3.4.0 (4.1)	Brick/Solid Block Type "D" Round Catch Basin
3.4.1 (4.5)	Brick/Solid Block Round Catch Basin with Gutter Inlet
3.4.2 (4.3)	Brick/Solid Block Type "F" Round Catch Basin
3.4.3 (4.6)	Brick/Solid Block Type "R" Catch Basin
3.4.4 (4.70)	Solid Block Flush Round Catch Basin
3.4.5 (4.8)	Brick/Solid Block 5'-0" or 6'-0" Round Catch Basin
3.5.0	Solid Block Shallow Type "F" Square Catch Basin (Pipe Cover 1'-6" to 3'-0")

- 3.5.1 Solid Block Shallow 5'-0" or 6'-0" Square Catch Basin  
(Pipe Cover 1'-6" to 3'-0")
- 3.5.2 Solid Block Shallow Double Grate Catch Basin  
Grate Parallel to Curb
- 3.5.3 Solid Block Shallow Double Grate Catch Basin  
Grate Parallel to Edge of Pavement
- 3.5.4 Solid Block Shallow Double Grate Catch Basin  
Grate Perpendicular to Curb
- 3.5.5 Solid Block Shallow Double Grate Catch Basin  
Grate Perpendicular to Edge of Pavement
- 3.6.0 (4.11) Brick/Solid Block Drop Inlet
- 3.7.0 (3.5) Brick/Solid Block Round Manhole or Catch Basin  
Depth Greater Than 12'-0"
- 4.2.0 (4.32) Precast 4'-0" Round Manhole
- 4.2.1 (4.33) Precast 5'-0" Round Manhole
- 4.2.2 (4.34) Precast 6'-0" Round Manhole
- 4.3.0 (4.37) Precast 4'-0" or 6'-0" Square Manhole or Catch Basin
- 4.4.0 (4.31) Precast 4'-0", 5'-0" or 6'-0" Round Catch Basin
- 4.5.0 (4.12) Precast Concrete Drop Inlet
- 4.5.1 (4.13) Precast Concrete Drop Inlet Lateral Outlet
- 4.5.2 (4.14) Precast Concrete Drop Inlet Longitudinal Outlet
- 4.6.0 Concrete Cover for Shallow 4'-0" Round Manholes
- 4.6.1 Concrete Cover for Shallow 5'-0" Round Manholes
- 4.7.0 (4.38) Top Cover for 4'-0" or 6'-0" Square Catch Basins and Manholes
- 4.7.1 (4.39) Top Cover Monolithic with Riser Section for 4'-0" or 6'-0"  
Square Catch Basins and Manholes
- 4.7.2 (4.36) Alternate Top Cover for Round Precast Manholes and Catch Basins
- 4.8.0 Concrete Cover for Shallow Type "F" Square Catch Basins
- 4.8.1 Concrete Cover for Shallow Double Grate Catch Basins With Curb
- 4.8.2 Concrete Cover for Shallow Double Grate Catch Basins Without Curb
- 4.8.3 Concrete Cover for Shallow 5'-0" Square Catch Basins
- 4.8.4 Concrete Cover for Shallow 6'-0" Square Catch Basins
- 5.1.0 (4.15) Precast Concrete Sump for Round Catch Basins (Wet Areas)

5.2.0 (4.35)	Round Manholes and Catch Basins Maximum Pipe Size Standard
5.3.0 (5.33)	Catch Basin and Manhole Step
5.4.0 (4.95)	Concrete Collars
6.1.0 (5.11)	Light-Duty Square Frame and Round Cover
6.1.1	Heavy-Duty Square Frame and Round Cover
6.2.0 (5.21)	Light-Duty Round Frame and Cover
6.2.1 (5.22)	Heavy-Duty Round Frame and Cover
6.3.0 (5.12)	Square Frame and Grate
6.3.1 (5.13)	Square Frame and Grate
6.3.2 (5.17)	Square Frame and Grate (Bicycle Safe)
6.3.3 (5.15)	High Capacity Frame and Grate
6.3.4 (5.16)	High Capacity Frame and Grate (Bicycle Safe)
6.4.0 (5.14)	Round Frame and Grate
7.1.0 (7.11)	Precast Concrete Curb
7.1.1 (7.18)	3'-0" Precast Concrete Transition Curb
7.1.2 (7.17)	6'-0" Precast Concrete Transition Curb
7.1.3 (7.19)	Precast Concrete Wheelchair Ramp Transition Curb
7.1.4 (7.16)	Precast Concrete 2'-0" Radius Corner
7.1.5 (7.12)	Precast Concrete Inlet Stone (for Square Catch Basin)
7.1.6 (7.13)	Precast Concrete Inlet Stone (for Round Catch Basin)
7.1.7 (7.14)	Precast Concrete Apron Stone (for Square Catch Basin)
7.1.8 (7.15)	Precast Concrete Apron Stone (for Round Catch Basin)
7.2.0 (7.21)	Precast Concrete Sloped Face Curb
7.2.1 (7.24)	Precast Concrete Sloped Face Transition Curb
7.2.2 (7.27)	Precast Concrete Transition Curb (Vertical Face to Sloped Face)
7.2.3 (10.9)	Precast Concrete Lot Curb
7.2.4 (7.29)	Precast Concrete Car Stops
7.3.0 (7.51)	Granite Curb
7.3.1 (7.58)	3'-0" Granite Transition Curb
7.3.2 (7.57)	6'-0" Granite Transition Curb
7.3.3 (7.59)	Granite Wheelchair Ramp Transition Curb

7.3.4 (7.56)	Granite 2'-0" Radius Corner
7.3.5 (7.52)	Granite Inlet Stone (for Square Catch Basin)
7.3.6 (7.53)	Granite Inlet Stone (for Round Catch Basin)
7.3.7 (7.54)	Granite Apron Stone (for Square Catch Basin)
7.3.8 (7.55)	Granite Apron Stone (for Round Catch Basin)
7.4.0 (7.50)	Granite Sloped Face Curb
7.4.1 (7.61)	Granite Sloped Face Transition Curb
7.4.2 (7.60)	Granite Transition Curb (Vertical Face to Sloped Face)
7.5.0 (7.41)	Bituminous Concrete Lip Curb
7.5.1 (7.43)	Bituminous Berm
7.6.0	Curb Setting Detail
8.1.0 (8.1)	Seeded Ditch
8.2.0 (8.2)	Bituminous Concrete Ditch
8.3.0 (8.3)	Rip-Rap Ditch
8.4.0	Paved Waterway
9.1.0 (9.1)	Baled Hay Erosion Check
9.2.0 (9.2)	Silt Fence Detail
9.3.0 (9.3)	Baled Hay Erosion Check and Silt Fence Combined
9.4.0 (9.4)	Baled Hay Ditch and Swale Erosion Check
9.5.0 (9.5)	Log and Hay Check Dam
9.6.0 (9.6)	Sand Bag Erosion Check
9.7.0 (9.8)	Dewatering Basin
9.8.0 (9.12)	Baled Hay Catch Basin Inlet Protection
9.9.0 (9.13)	Construction Access
10.1.0 (10.1)	Wet Stone Masonry Retaining Wall
10.2.0 (10.3)	Rubble Masonry Wall
10.3.0 (10.2)	Concrete Retaining Wall
10.4.0 (10.12)	Stone Masonry Steps
14.1.0 (14.1)	Concrete Highway Bound
14.2.0 (14.2)	Granite Highway Bound
14.3.0 (14.4)	Highway Bound Set In Concealed Ledge



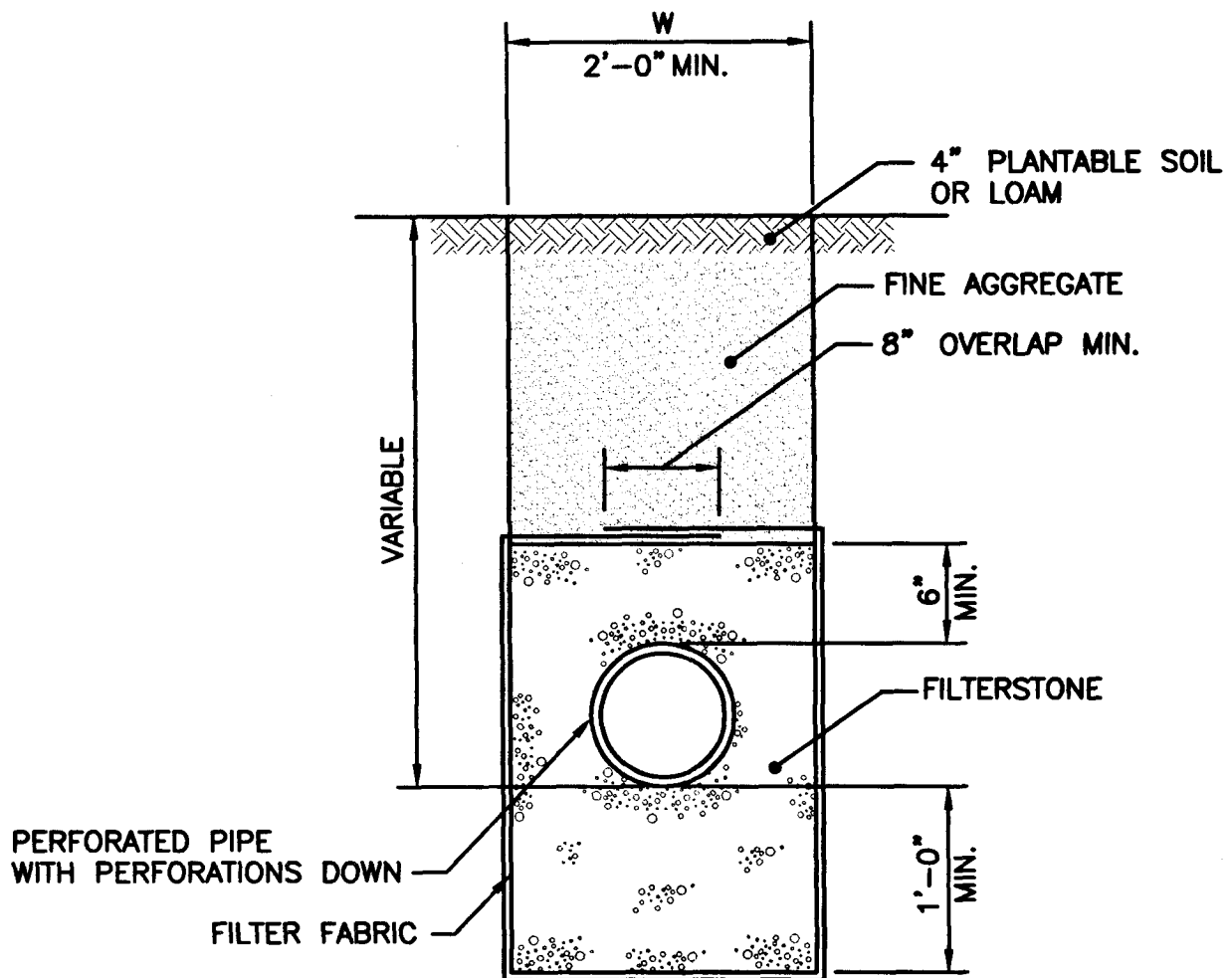
14.4.0 (14.91)	Reinforced Concrete Precise Level Monument
14.4.1 (14.9)	Standard Bench Mark Heads
14.4.2 (14.92)	Standard Marker Triangulation Station
14.4.3 (14.93)	Geodetic Survey Disk
14.5.0 (---)	Survey Wedge
14.5.1 (---)	Survey Stake
15.1.0 (15.30)	Post and Mounting for Rural Mailbox
15.2.0 (15.20)	Post and Multiple Mountings for Rural Mailboxes
17.1.0	Traffic Monitoring Station Single Junction Box Wood Post Detail
17.1.1	Traffic Monitoring Station Double Junction Box Wood Post Detail
17.2.0	Traffic Monitoring Station Portable Computer Cable
17.3.0	Traffic Monitoring Station Pole Mounted Cabinet
17.3.1	Traffic Monitoring Station Type "H" Cabinet Post Mounted Installation
17.3.2	Traffic Monitoring Station Type "H" Cabinet - Electrical Service
17.4.0	Traffic Monitoring Station Controller Cabinet Ground Mounted Installation
17.4.1	Traffic Monitoring Station Controller Cabinet Wiring Details - Interior
17.5.0	Traffic Monitoring Station Power Outlet Box
17.6.0	Traffic Monitoring Station Flexible Conduit Installation
17.7.0	Traffic Monitoring Station Loop Wire Layout for Directional Counting
17.7.1	Traffic Monitoring Station Loop Wire Layout for Multiple Lanes in the Same Direction
17.7.2	Traffic Monitoring Station Axle Sensor and Loop Layout
17.7.3	Traffic Monitoring Station Loop Dimensions
17.7.4	Traffic Monitoring Station Loop Wire Installation
17.7.5	Traffic Monitoring Station Sawcut Cross-section with a Pavement Overlay
17.7.6	Traffic Monitoring Station Sawcut Cross-section without a Pavement Overlay

18.1.0 (18.1)	Concrete Light Standard Base
18.2.0 (18.10)	Precast Type “A” Handhole
18.2.1 (18.11)	Precast Type “H” Heavy-Duty Handhole
18.2.2	Precast Type “B” Pullbox
18.3.0 (19.8)	Aluminum Lighting Standards
18.3.1	Aluminum Pole – Grounding Detail
18.3.2	Typical Luminaire – Wiring Diagram
18.3.4 (18.4)	Breakaway Support Couplings for Light Standards
18.3.5 (18.5)	Recessed Bolt Couplings for Light Standards
18.4.0	Service Pedestal
18.4.1	Service Pedestal – Grounding Detail
18.4.2	Service Pedestal 240/480 Volts – 3W
18.4.3	Service Pedestal 240/480 Volts – 3W
18.4.4	Service Pedestal 120/240 or 120/208 Volts – 3W
18.4.5	Service Pedestal 120/240 or 120/208 Volts – 3W
18.5.0	Phase-Neutral Connector Kit
18.6.0 (18.26)	Trench Detail for Conduit in Existing Roadway
18.7.0	Riser Pole Detail
19.1.0 (19.1)	Ground Mounted Controller Installation
19.1.1 (19.9)	Pole Mounted Controller Installation
19.2.0 (19.2)	Steel Mast Arm
19.3.0 (19.3)	Steel Span Pole
19.4.0 (19.4)	Aluminum Pedestal
19.5.0 (19.21)	Mast Arm and Span Pole Foundation
19.5.1 (19.31)	Ornamental Mast Arm Foundation
19.6.0A (19.5)	Inductance Loop Vehicle Detector Installation Details (Sheet 1 of 2)
19.6.0B (19.5)	Inductance Loop Vehicle Detector Installation Details (Sheet 2 of 2)
20.1.0 (19.15)	Pavement Markings – Arrows and Only
20.2.0 (19.16)	Bi-Directional Control Device
24.1.0 (24.1)	Sign Post Selection and Installation Details Square Post (Signs up to 8’-0” W x 4’-0” H)

24.2.0 (24.2)	Sign Post Selection and Installation Details U-Channel Post (Signs up to 8'-0"Wx4'-0"H)
24.3.0	Construction and Temporary Sign Mountings (Signs up to 60 Sq. Ft.)
24.4.0 (24.17)	Cantilever Breakaway Sign Support for 4'-0" to 5'-0" Sidewalks
24.6.0 (24.14)	Parking Sign Mounting Detail
24.6.1 (19.10)	Street Sign Mounting Detail
24.6.2 (24.16)	Mile Marker Mounting Detail
24.6.3 (24.15)	Lightweight Steel Delineator Mounting Detail
24.6.4 (24.13)	Bridge Abutment Marker Mounting Detail
25.1.0 (25.7)	Temporary Construction Sign Cover Detail
25.2.0 (25.8)	Box Form
26.1.0 (26.6)	Fluorescent Traffic Cone
26.2.0 (26.5)	Polyethylene Drum with Markings
26.3.0 (26.15)	PVC Plastic Pipe Type III Barricade
26.3.1 (26.15A)	Plastic Pipe Type III Barricade
27.1.0 (27.0)	Regulatory Signs
27.1.1 (27.1)	Traffic Fines In Work Zone Regulatory Sign
28.1.0 (28.0)	Warning Signs
29.1.0 (29.0)	Construction Signs
29.1.1 (29.50)	Field Office Identification Sign
29.2.0 (29.0)	Guide Signs
30.1.0	Sign Location Details (Signs 6'-0"Wx4'-0"H and Greater)
30.1.1	Post Selection Table for Breakaway Signs (Signs 6'-0"Wx4'-0"H and Greater)
30.2.0	Foundation Details (Signs 6'-0"Wx4'-0"H and Greater)
30.2.1	Foundation Modification for Retrofit (Signs 6'-0"Wx4'-0"H and Greater)
30.3.0	Sign Panel Details (Signs 6'-0"Wx4'-0"H and Greater)
30.3.1	Post Clip and Bolt Detail (for Extruded Aluminum)
30.4.0	Ground Mounted Primary Directional Sign Post on Breakaway Couplings
30.4.1	Bracket Selection Table, Bolt Circle and General Notes

30.4.2	Installation Notes
30.4.3	Bill of Materials
31.1.0 (31.1)	Chain Link Fence 3'-0" to 4'-0"
31.2.0 (31.3)	Chain Link Fence 5'-0" to 6'-0"
31.2.1 (31.32)	Chain Link Fence 5'-0" to 6'-0" Intermediate Post
31.3.0 (32.10)	Woven Wire Right-of-Way Fence (Steel Post)
34.1.0 (34.1)	Typical Guardrail Installation
34.1.1 (34.4)	Typical Guardrail Installation at Structures
34.1.2 (34.7)	Typical Guardrail Post Installation In Ledge
34.2.0 (34.33)	Steel Beam Guardrail
34.2.1 (34.32)	Steel Beam Guardrail Details
34.2.2 (34.31)	Steel Beam Guardrail Double Faced Assembly
34.2.3 (34.34)	Steel Beam Guardrail Fixtures
34.2.4 (34.36)	Steel Beam Guardrail Post and Offset Bracket "C" Section
34.2.5 (34.37)	Steel Beam Guardrail Reflectorized Triangular Delineator
34.3.0 (34.26)	Earth Berm for Roadside Barrier Terminal Sections
34.3.1 (34.50)	Guardrail End Section
34.3.2	Terminal End Section (Single Face)
34.3.3 (34.51)	Anchorage Details Approach End Section
34.3.4 (34.6)	Anchorage Details Trailing End Section
34.3.5 (34.11)	Guardrail Connection to Existing End Post Approach End Section
34.3.6 (34.10)	Guardrail Connection to Existing End Post Trailing End Section
34.3.7 (34.8)	Guardrail Connection to Barrier Approach End Section
34.3.8 (34.9)	Guardrail Connection to Barrier Trailing End Section
34.4.0 (34.23)	Steel Backed Timber Guardrail
34.4.1 (34.24)	Steel Backed Timber Guardrail Terminal Section - Type 1
34.4.2 (34.25)	Steel Backed Timber Guardrail Terminal Section - Type 2
40.1.0 (40.1)	Double-Faced Precast Median Barrier
40.2.0 (40.2)	Single-Faced Precast Median Barrier
40.2.1 (40.21)	Single-Faced Precast Median Barrier
40.3.0 (40.3)	Precast Median Barrier Transition Unit

40.4.0 (40.4)	Precast Median Barrier for Light Standard
40.5.0 (40.5)	Unanchored Precast Concrete Barrier for Temporary Traffic Control
43.1.0 (43.1)	Cement Concrete Sidewalk
43.2.0 (43.2)	Bituminous Concrete Sidewalk
43.3.0 (43.32)	Wheelchair Ramp
43.3.1 (43.34)	Wheelchair Ramp for Limited Right-of-Way Areas
43.4.0 (43.41)	Driveway Development for 3'-0" Transition Curb
43.4.1 (43.42)	Driveway Development for 6'-0" Transition Curb
43.5.0 (43.50)	Cement Concrete Driveways
47.1.0 (47.0)	Pavement Removal Drop-Off Detail
47.1.1 (47.1)	Transverse Pavement Cut and Match
48.1.0	Detectable Warning Systems
50.1.0 (50.1)	Large Tree Staking and Planting Detail (2" Caliper and Greater)
50.1.1 (50.3)	Tree Planting on Slope
50.1.2 (50.11)	Paver Detail Around New Trees
50.2.0 (50.2)	Evergreen Tree Planting Detail (4'-0" High and Greater)
50.3.0 (50.4)	Ball and Burlap Shrub Planting Detail
50.3.1 (50.5)	Container Grown Shrub Planting Detail
50.3.2 (50.6)	Shrub Planting on Slope
50.4.0 (50.7)	Perennial Planting Detail
50.5.0 (50.8)	Ornamental Grass Planting Detail
50.6.0 (50.9)	Groundcover Planting Detail
50.7.0 (50.10)	Bulb Planting Detail
51.1.0 (51.1)	Tree Protection Device
51.1.1 (51.3)	Drip Line Tree Protection Device for Existing Trees
51.2.0 (51.2)	Shrub Protection Device
51.3.0 (51.4)	Tree Well
51.4.0 (51.5)	Tree Wall



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. WIDTH (W) OF TRENCH = INSIDE DIAMETER OF PIPE + 1'-0" OR 2'-0" WHICH EVER IS GREATER.
3. MINIMUM PIPE DIAMETER 8".
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

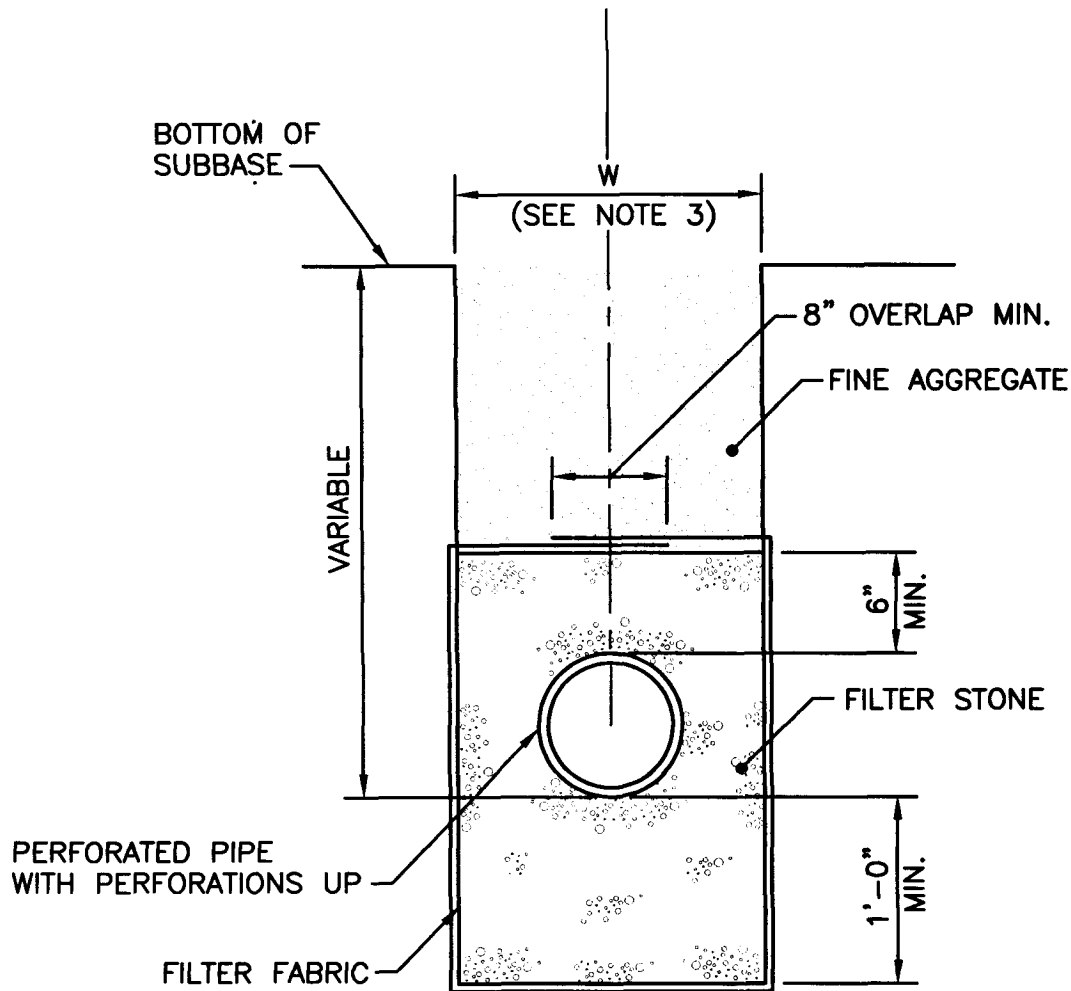
**UNDERDRAIN**

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 703 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM PIPE DIAMETER 1'-0".
3. TRENCH WIDTHS: PIPE  $\leq$  36" = O.D. + 24" EACH SIDE  
PIPE > 36" = O.D. + 30" EACH SIDE
4. DISTANCE DIMENSIONS ARE GIVEN TO THE OUTSIDE DIAMETER OF PIPE.
5. SEE CONSTRUCTION PLANS FOR LOCATION.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

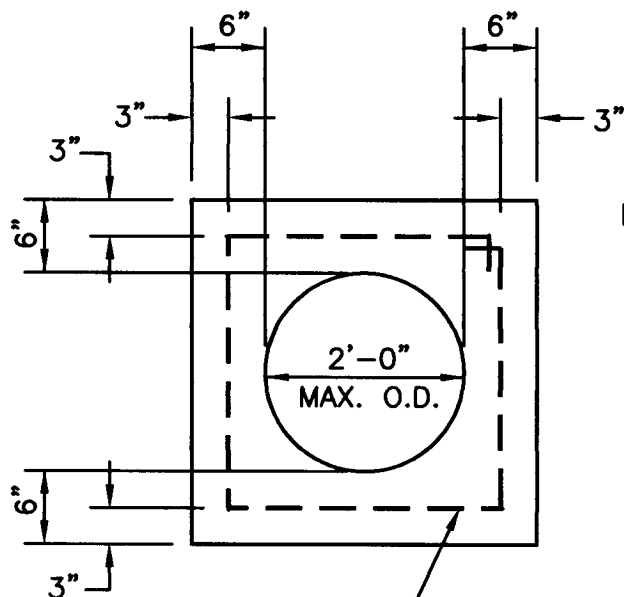
**COMBINATION DRAIN**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

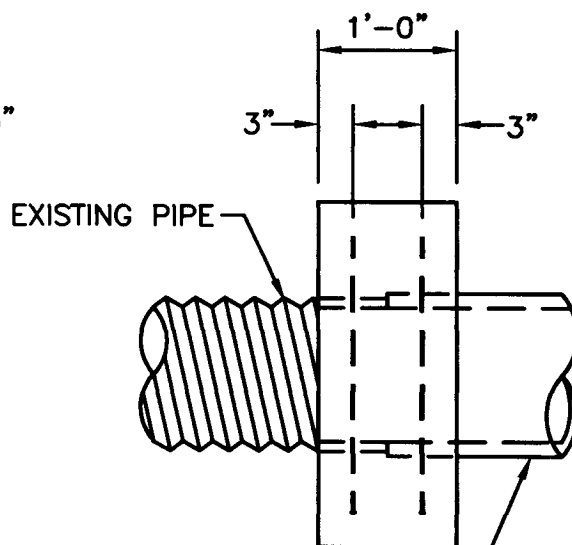
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





(1)-#4 EPOXY  
COATED REBAR, E.F.



CONCRETE, STEEL, CLAY  
OR CAST IRON PIPE

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. MAXIMUM PIPE DIAMETER FOR USE OF CONNECTING COLLAR IS 2'-0".
3. PIPE WITH LARGEST OUTSIDE DIAMETER USED TO DETERMINE SIZE OF COLLAR.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

## CONCRETE CONNECTING COLLAR

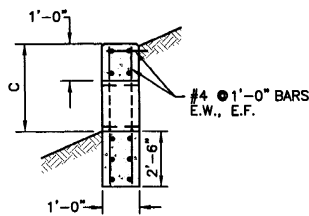
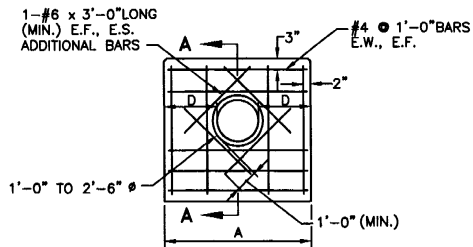
*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

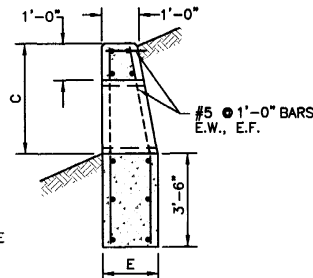
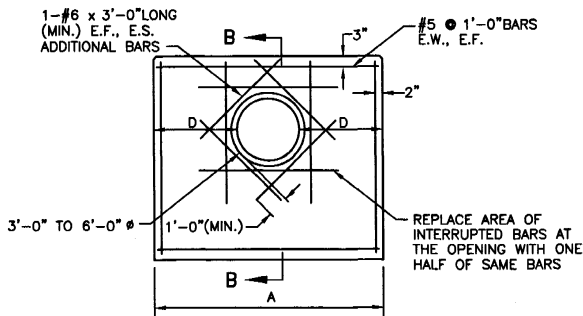
JUNE 15, 1998  
ISSUE DATE







SECTION A-A



SECTION B-B

DIAMETER OF PIPE	A	C	D	E	CU. FT. CONCRETE
1'-0"	3'-0"	2'-2"	1'-0"	-	13.2
1'-3"	3'-9"	2'-5"	1'-3"	-	17.2
1'-6"	4'-6"	2'-8"	1'-6"	-	21.5
1'-9"	5'-3"	2'-11"	1'-9"	-	26.0
2'-0"	6'-0"	3'-2"	2'-0"	-	30.9
2'-3"	6'-9"	3'-6"	2'-3"	-	36.5
2'-6"	7'-6"	3'-9"	2'-6"	-	42.0
3'-0"	9'-6"	4'-0"	3'-3"	1'-5"	84.1
3'-6"	11'-0"	4'-6"	3'-9"	1'-7"	111.8
4'-0"	12'-8"	5'-0"	4'-4"	1'-9"	146.5
4'-6"	14'-4"	5'-6"	4'-11"	1'-11"	186.3
5'-0"	16'-0"	6'-0"	5'-6"	2'-1"	232.6
5'-6"	17'-8"	6'-6"	6'-1"	2'-3"	284.9
6'-0"	19'-4"	7'-0"	6'-8"	2'-5"	343.6

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. 3/4" CHAMFER ON ALL EXPOSED EDGES.
3. 1'-0" COMPACTED GRAVEL UNDER HEADWALL.
4. ALL REINFORCING BARS SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONCRETE HEADWALLS FOR PIPE CULVERTS

R.I.  
STANDARD  
2.1.0

JUNE 15, 1998  
ISSUE DATE

*Edward J. Gagliardi*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

REVISIONS	NO.	BY	DATE

REVISIONS		
NO.	BY	DATE

<b>RHODE ISLAND DEPARTMENT OF TRANSPORTATION</b> <b>STANDARD HEADWALLS FOR MULTIPLE</b> <b>3'-6" TO 7'-0" PIPE CULVERTS</b>	
CHIEF ENGINEER <i>James J. Caputo</i> TRANSPORTATION	CHIEF DESIGN ENGINEER <i>Edward J. Kelly</i> TRANSPORTATION
JUNE 15, 1998 ISSUE DATE	

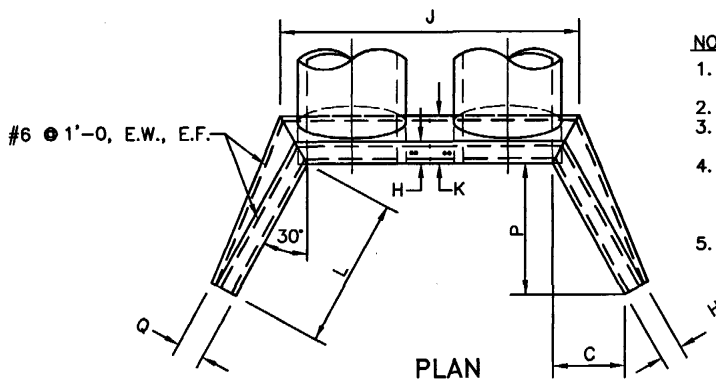
  

R.I.  
 STANDARD  
 2.2.0B

SHEET 2 OF 2

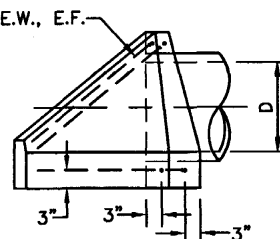
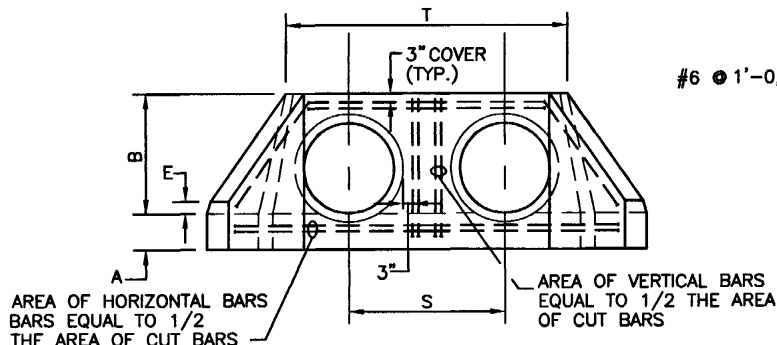
TABLE OF DIMENSIONS AND CONCRETE VOLUMES PER HEADWALL FOR 3'-6" TO 7'-0" CIRCULAR PIPE CULVERTS									
		DIAMETER OF PIPE CULVERTS							
		3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
FOR 1 1/2:1 FILL SLOPE	A	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"	1'-6"
	B	4'-4"	4'-10"	5'-4"	5'-10"	6'-4"	6'-10"	7'-4"	7'-10"
	C	3'-3 3/4"	3'-9"	4'-2 1/4"	4'-7"	5'-0 5/8"	5'-5 3/4"	5'-11"	6'-4 1/4"
	D	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
	E	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"	0'-6"
	H	0'-10"	0'-10"	0'-11"	1'-0"	1'-1"	1'-2"	1'-3"	1'-4"
	J	11'-8 1/2"	13'-2 1/4"	14'-9 1/4"	16'-4"	17'-11"	19'-6"	21'-0 3/4"	22'-7 5/8"
	K	1'-11"	2'-0 1/2"	2'-3"	2'-5 1/2"	2'-8"	2'-10 1/2"	3'-1"	3'-3 1/2"
	L	6'-7 5/8"	7'-6"	8'-4 1/2"	9'-2 7/8"	10'-1 1/4"	10'-11 5/8"	11'-10"	12'-8 3/8"
	P	5'-9"	6'-6"	7'-3"	8'-0"	8'-9"	9'-6"	10'-3"	11'-0"
	Q	0'-11 1/2"	0'-11 1/2"	1'-0 1/2"	1'-1 1/2"	1'-2 1/2"	1'-3 1/2"	1'-4 1/2"	1'-5 1/2"
CU. YD. CONC.	CONC. PIPE	3.6	4.4	5.7	7.1	8.8	10.8	12.9	15.4
	C.M. PIPE	3.8	4.7	6.1	7.7	9.5	11.7	14.4	16.7
FOR 2:1 FILL SLOPE	C	4'-4"	4'-10 7/8"	5'-5 3/4"	6'-0 3/4"	6'-7 5/8"	7'-2 5/8"	7'-9 1/2"	8'-4 1/2"
	J	11'-8 1/4"	13'-2"	14'-9"	16'-3 3/4"	17'-10 3/4"	19'-5 1/2"	21'-0 1/2"	22'-7 1/8"
	L	8'-0"	9'-9 3/4"	10'-11 5/8"	12'-1 1/2"	13'-3 3/8"	14'-5 1/4"	15'-7"	16'-9"
	P	7'-6"	8'-6"	9'-6"	10'-6"	11'-6"	12'-6"	13'-6"	14'-6"
CU. YD. CONC.	CONC. PIPE	4.3	5.3	6.8	8.6	10.7	13.0	15.7	18.7
	C.M. PIPE	4.5	5.6	7.2	9.1	11.4	13.9	16.8	20.0

**NOTE:**  
FOR ALL DIMENSIONS NOT SHOWN, SEE VALUES LISTED ABOVE FOR 1 1/2:1 FILL SLOPE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS.
2. QUANTITIES GIVEN ARE FOR ONE ENDWALL.
3. FOR DIMENSIONS NOT GIVEN IN TABLE, SEE SHEET 2 OF 2.
4. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1'-0" OR LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
5. ALL REINFORCING BARS SHALL BE EPOXY COATED.



**END ELEVATION**

**SIDE ELEVATION**

FOR CORRUGATED METAL PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	5'-3 1/2"	8'-9 1/2"	5.1	1.3	5.8	1.3
4'-0"	6'-0 1/2"	10'-0 1/2"	6.3	1.7	7.2	1.4
4'-6"	6'-9 1/2"	11'-3 1/2"	8.3	2.1	8.4	2.1
5'-0"	7'-6 1/2"	12'-6 1/2"	10.4	2.7	11.8	2.4
5'-6"	8'-3 1/2"	13'-9 1/2"	12.8	3.3	14.6	3.9
6'-0"	9'-0 1/2"	16'-0 1/2"	16.7	4.1	17.9	4.1
6'-6"	9'-9 1/2"	16'-3 1/2"	19.0	5.0	21.7	4.9
7'-0"	10'-6 1/2"	17'-6 1/2"	22.8	6.0	26.0	5.1

FOR CONCRETE PIPE						
DIAMETER OF PIPE	S	T	FILL SLOPE 1 1/2:1		FILL SLOPE 2:1	
			CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE	CU. YD. CONCRETE ONE DOUBLE ENDWALL	INCREASE CU. YD. FOR EACH ADDITIONAL PIPE
3'-6"	6'-0"	9'-6"	4.1	1.3	5.5	1.3
4'-0"	6'-10"	10'-10"	6.0	1.6	6.9	1.6
4'-6"	7'-0"	12'-2"	7.7	2.1	8.8	2.1
5'-0"	8'-6"	13'-6"	9.7	2.6	11.2	2.6
5'-6"	9'-4"	14'-10"	12.1	3.3	13.9	3.3
6'-0"	10'-2"	16'-2"	14.7	4.0	16.9	4.0
6'-6"	11'-0"	17'-6"	17.7	4.8	20.4	4.8
7'-0"	11'-10"	18'-10"	21.2	5.7	24.4	5.7

SHEET 1 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STANDARD HEADWALLS FOR MULTIPLE  
3'-6" TO 7'-0" PIPE CULVERTS

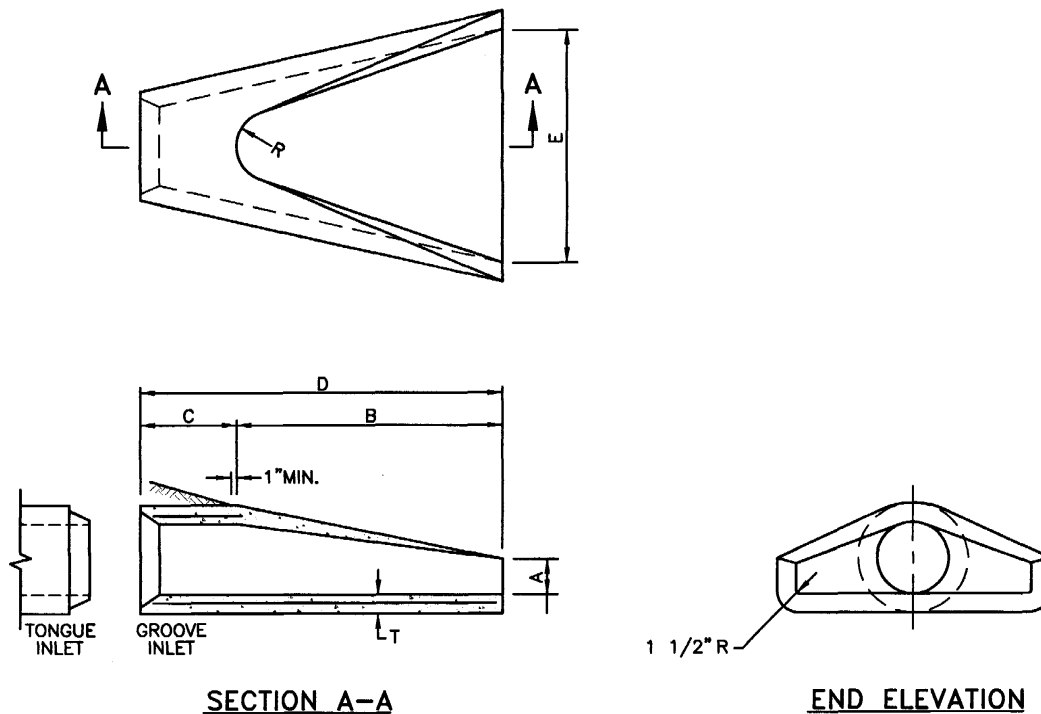
REVISIONS		
NO.	BY	DATE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Roberts*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





DIMENSIONS								REINFORCEMENT
DIA.	A	B	C	D	E	R	T	ONE LAYER REINFORCEMENT IN CENTER OF WALL
								MIN. AREA OF EACH WAY (SQ. IN./FT.)
1'-0"	4"	2'-0"	4'-0 7/8"	6'-0 7/8"	2'-0"	9"	2"	0.048
1'-3"	6"	2'-3"	3'-10"	6'-1"	2'-6"	11"	2 1/4"	0.054
1'-6"	9"	2'-3"	3'-10"	6'-1"	3'-0"	12"	2 1/2"	0.060
2'-0"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	1'-2"	3"	0.072
2'-6"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	1'-3"	3 1/2"	0.084
3'-0"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	1'-8"	4"	0.096
3'-6"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	1'-10"	4 1/2"	0.108
4'-0"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	1'-10"	5"	0.120
4'-6"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	2'-0"	5 1/2"	0.132
5'-0"	2'-6"	5'-0"	3'-3"	8'-3"	8'-0"	2'-0"	6"	0.144

NOTE:  
SHALL BE IN ACCORDANCE WITH SECTION 701 OF THE R.I. STANDARD SPECIFICATIONS.

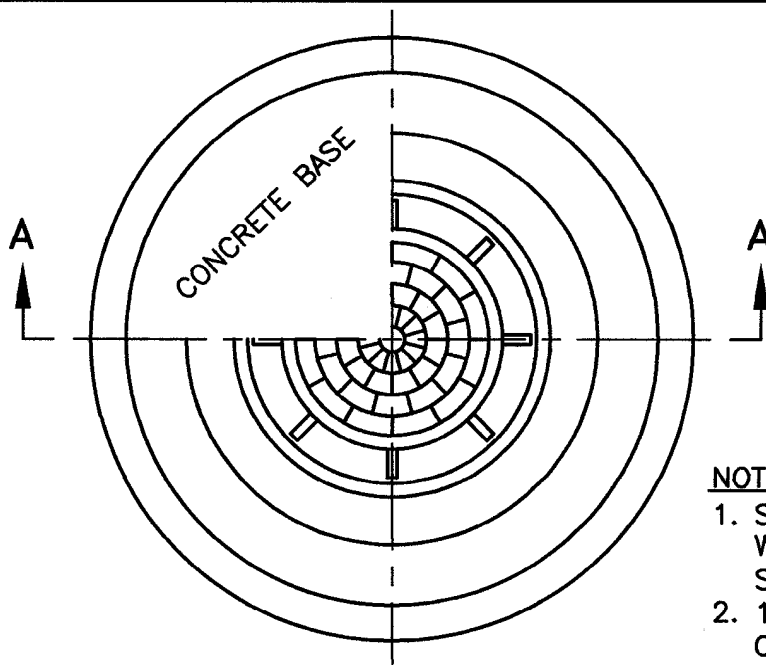
# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PRECAST CONCRETE FLARED END SECTION		R.I. STANDARD 2.3.0
NO.	BY	DATE			

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

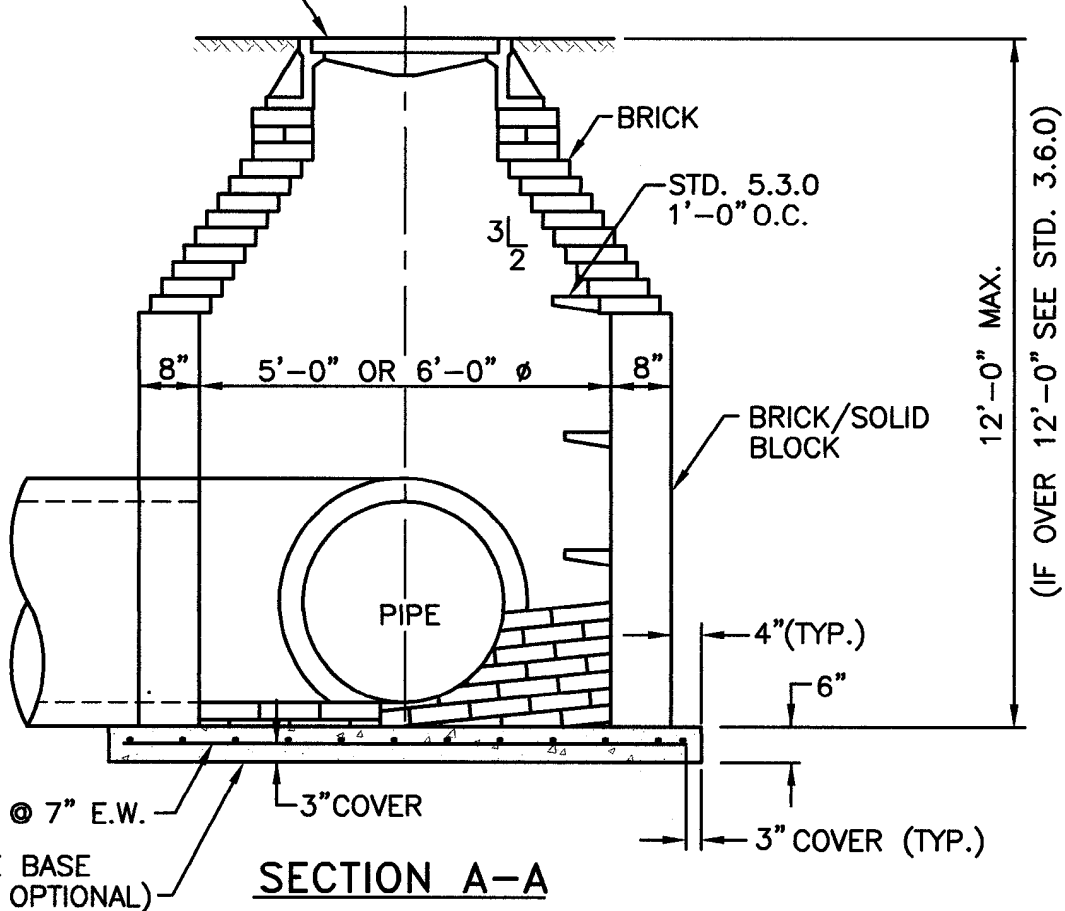


**PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

FRAME AND COVER



**SECTION A-A**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

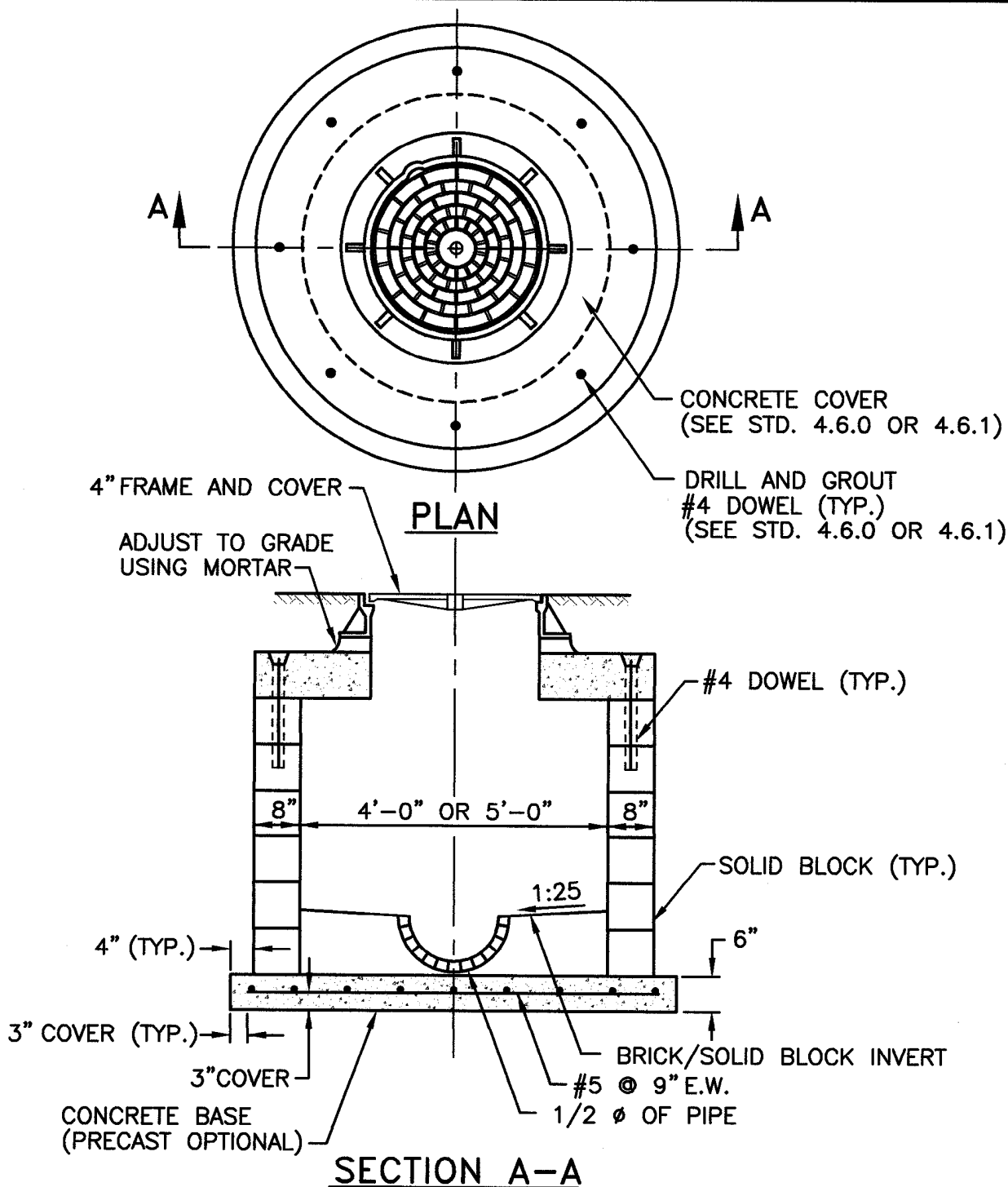
**BRICK/SOLID BLOCK**  
**5'-0" OR 6'-0" ROUND MANHOLE**

*James H. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
5. ALL PIPES SHALL BE SEALED TO MANHOLE ON INSIDE AND OUTSIDE SURFACES.
6. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

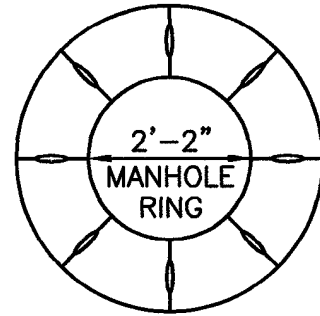
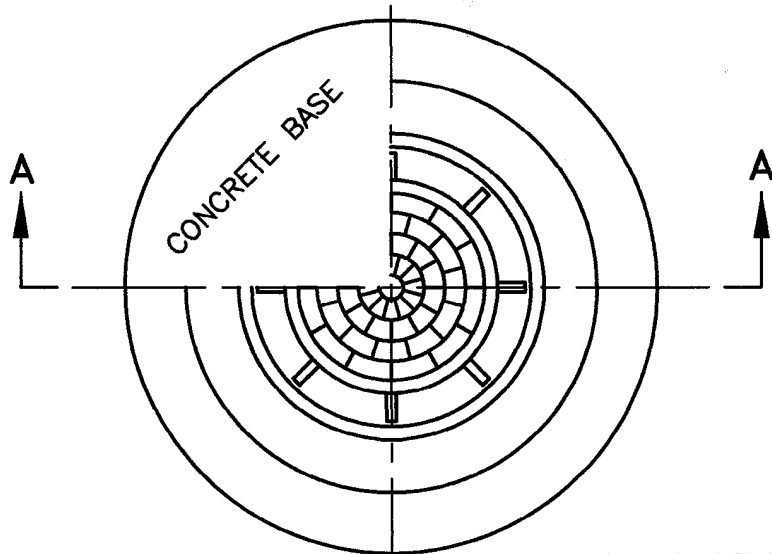
**SOLID BLOCK SHALLOW  
4'-0" OR 5'-0" ROUND MANHOLE**

*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund D. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

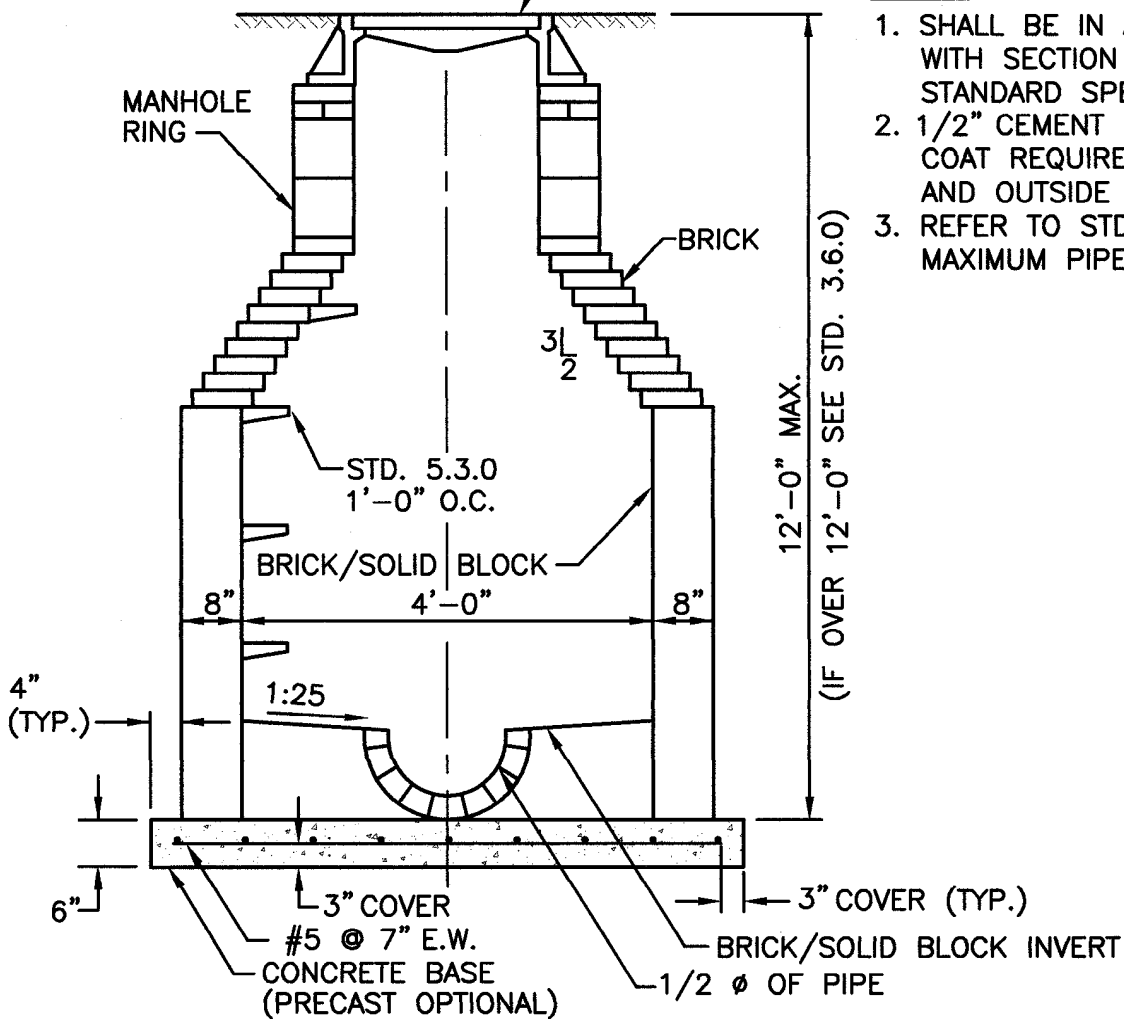
R.I.  
STANDARD  
**3.2.2**



**PLAN** FRAME AND COVER

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.



**SECTION A-A**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BRICK/SOLID BLOCK  
4'-0" ROUND MANHOLE**

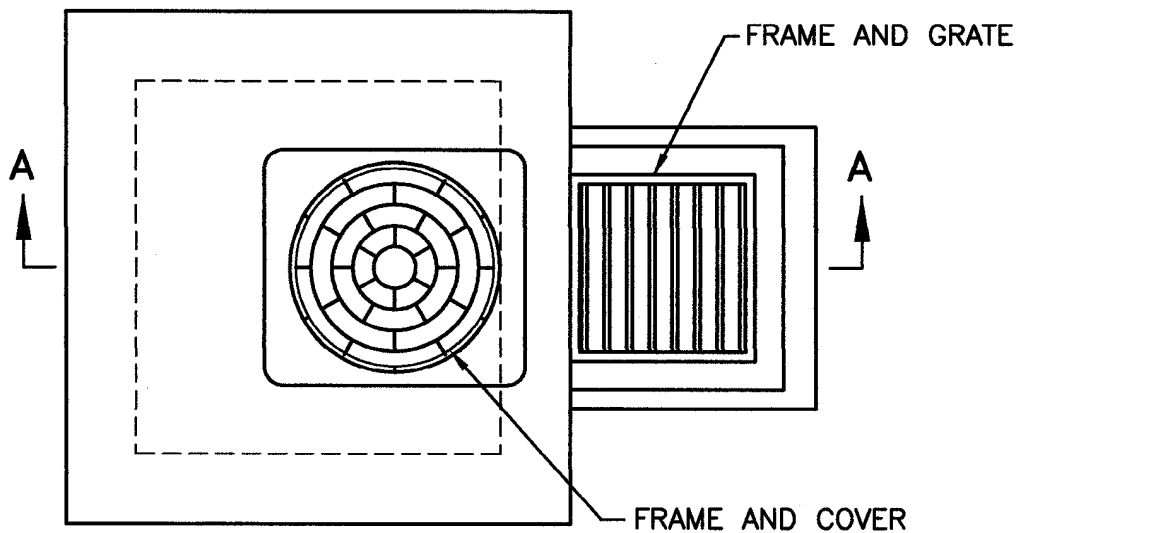
REVISIONS		
NO.	BY	DATE

*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

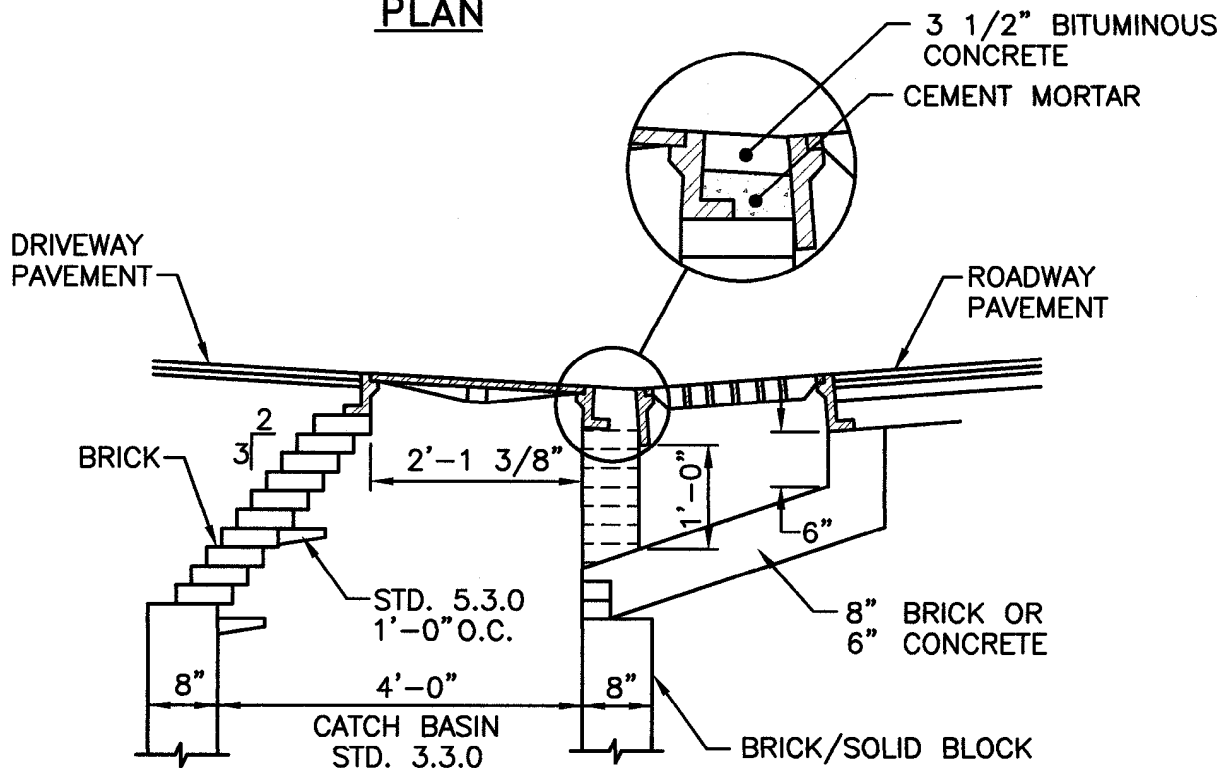
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





PLAN



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

**BRICK/SOLID BLOCK  
DRIVEWAY BASIN AND GUTTER INLET**

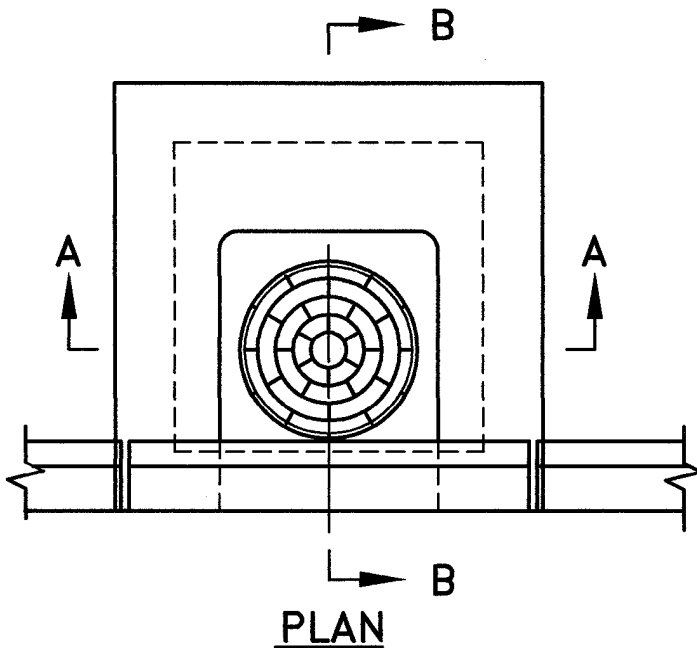
*James H. Cyparadi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

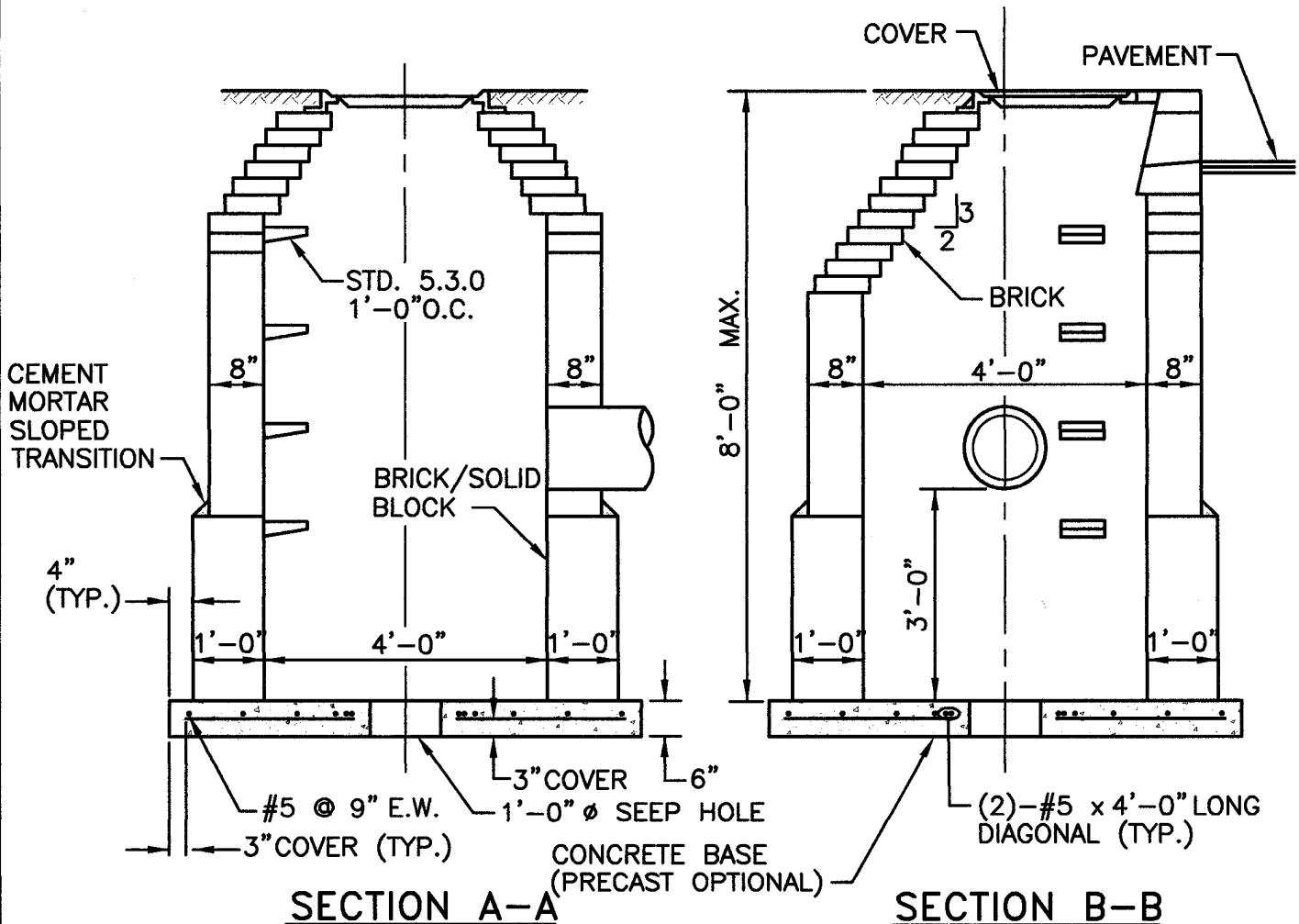






**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH AND 1'-0" WALLS UP TO 8'-0" DEPTH.



**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BRICK/SOLID BLOCK  
TYPE "D" SQUARE CATCH BASIN**

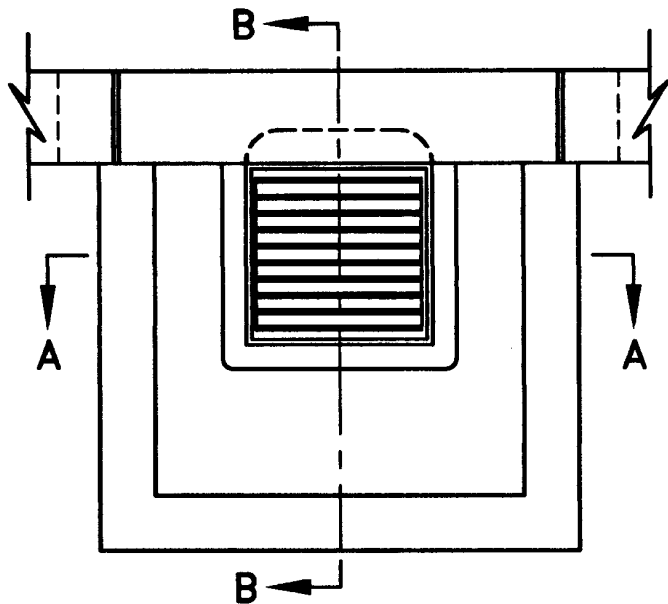
REVISIONS		
NO.	BY	DATE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

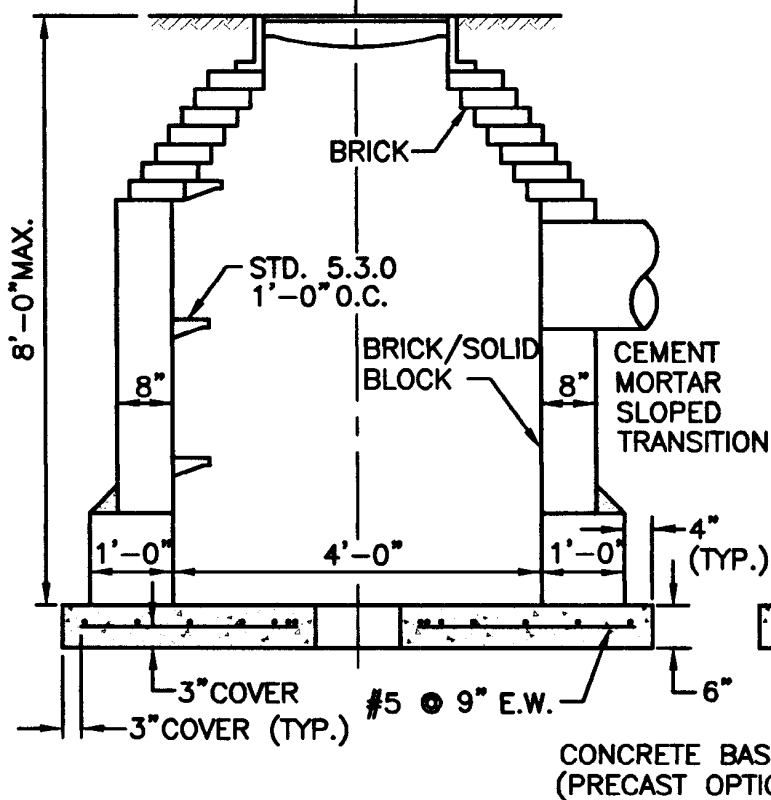




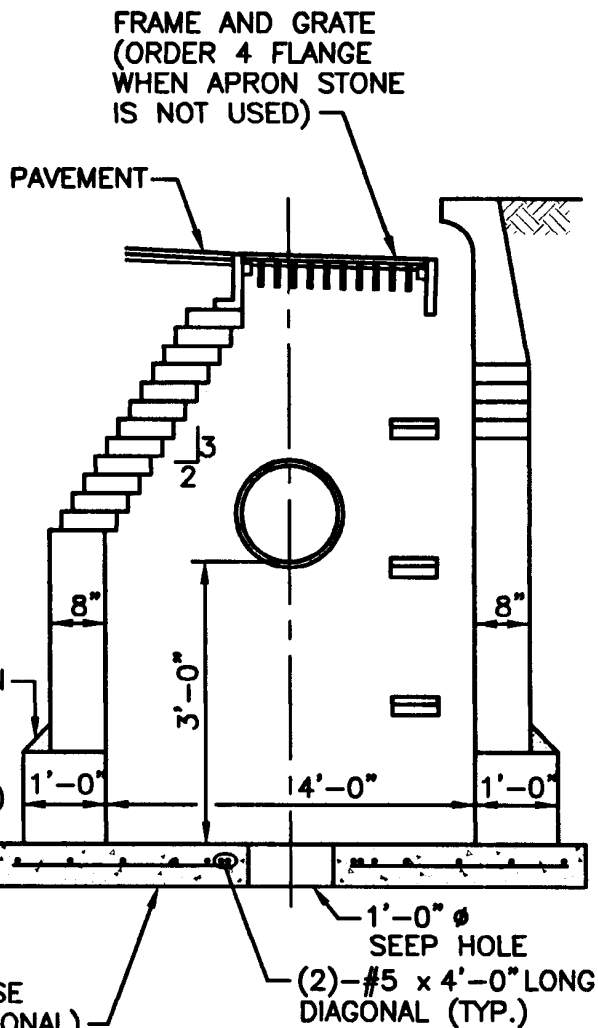
**PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS TO 6'-0" DEPTH, USE 1'-0" WALLS TO 8'-0" DEPTH.



**SECTION A-A**



**SECTION B-B**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

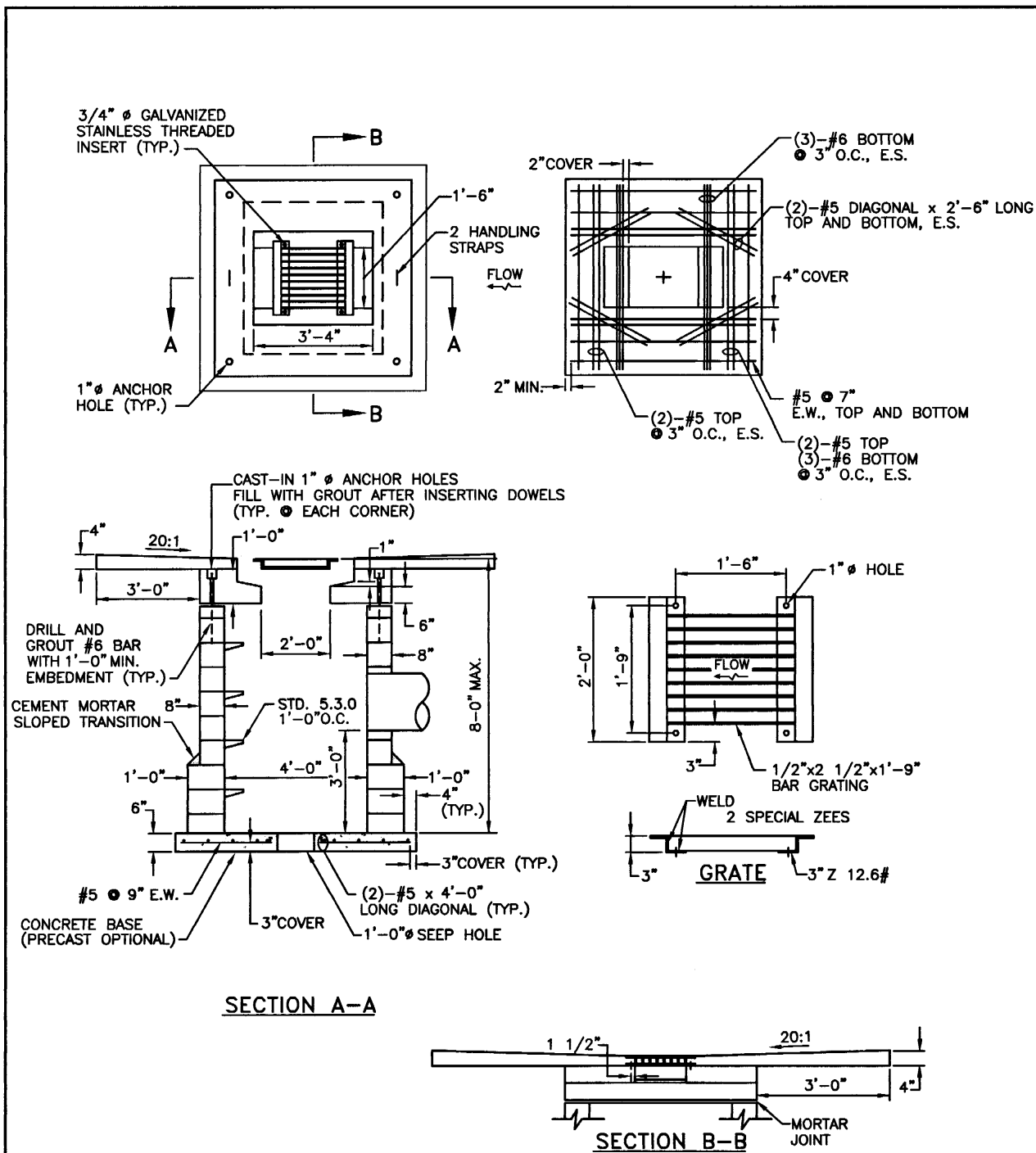
**BRICK/SOLID BLOCK  
TYPE "F" SQUARE CATCH BASIN**

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ALL REINFORCING BARS TO BE 5'-0" LONG UNLESS OTHERWISE NOTED.
4. USE 8" WALLS UP TO 6'-0" DEPTH AND 1'-0" WALLS UP TO 8'-0" DEPTH.
5. ALL REINFORCING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SOLID BLOCK FLUSH SQUARE CATCH BASIN**

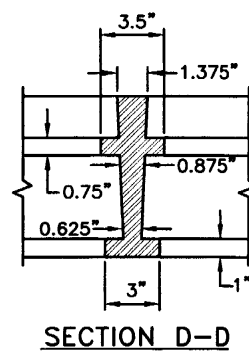
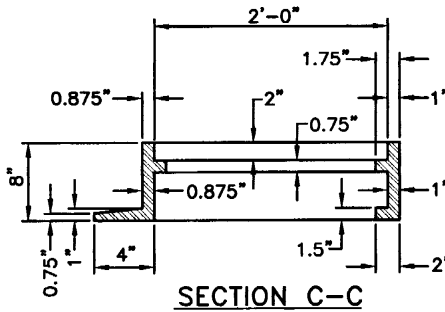
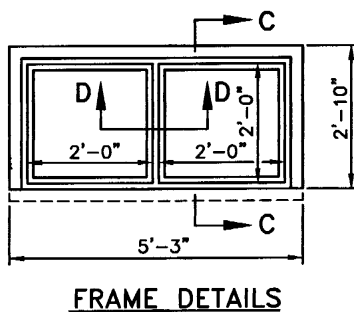
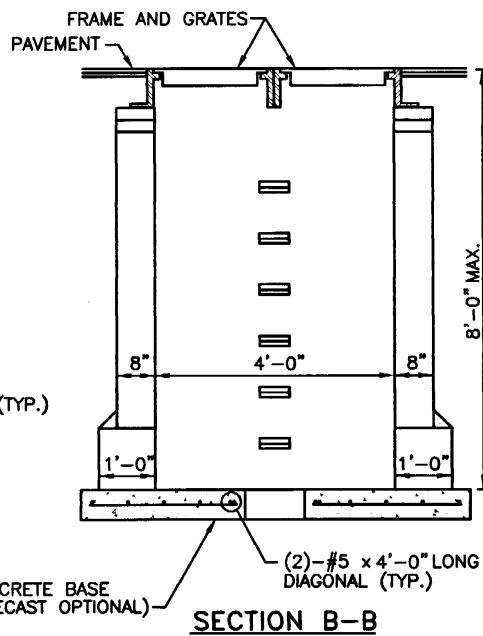
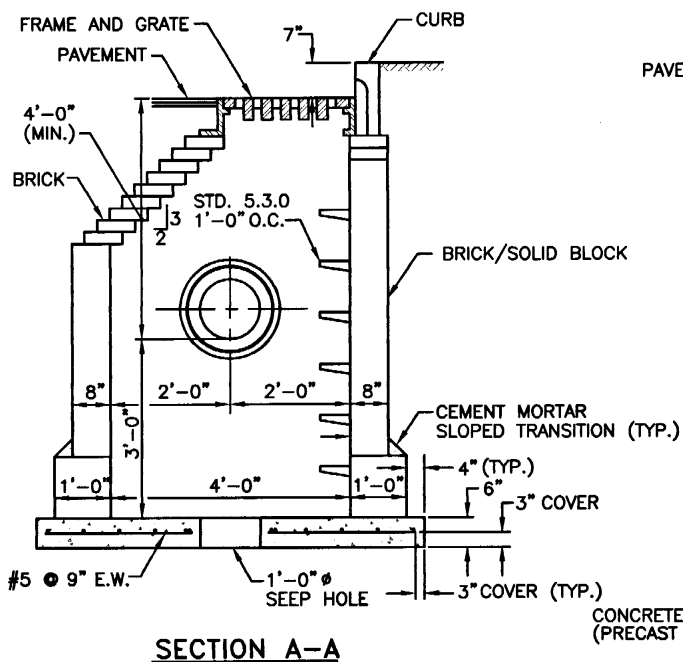
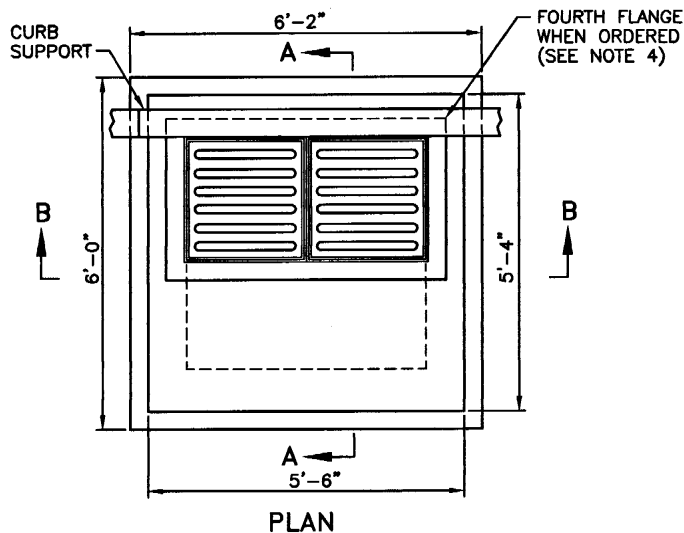
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

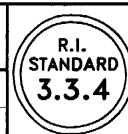
BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN  
 GRATE PARALLEL TO EDGE OF PAVEMENT

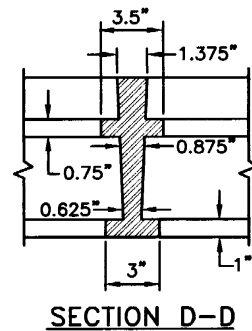
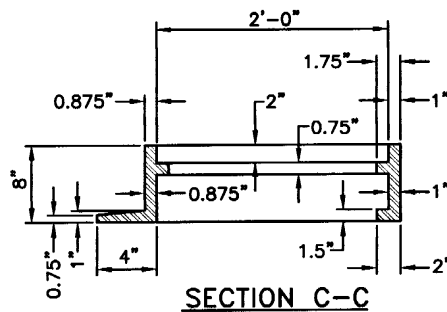
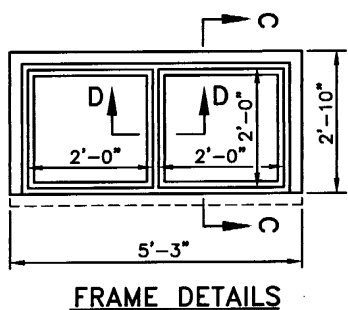
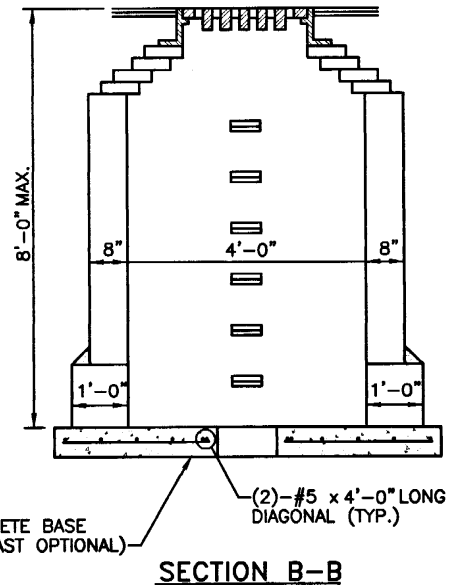
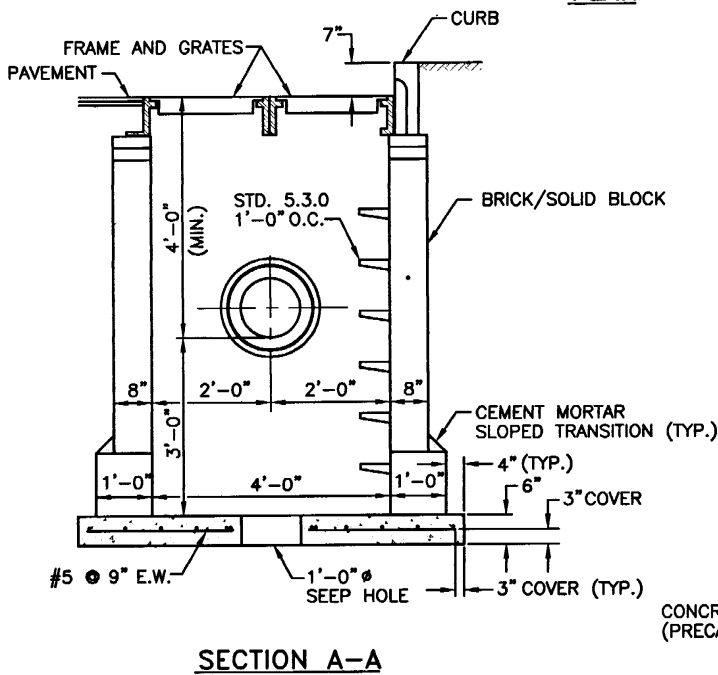
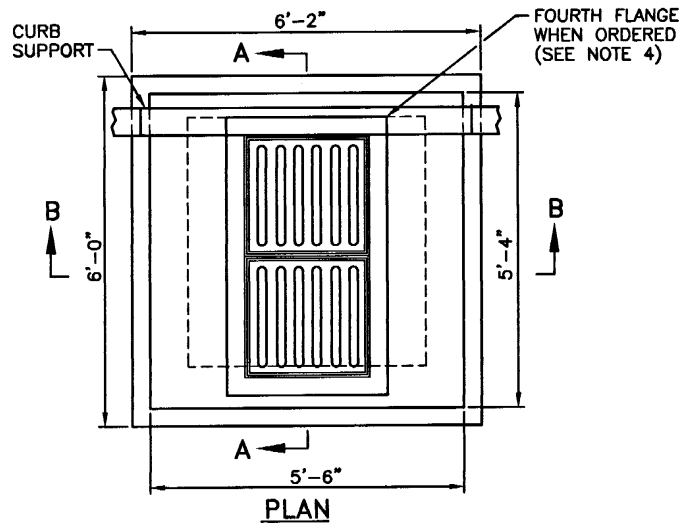
REVISIONS		
NO.	BY	DATE

*John A. Gagliardi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward J. Pendergast*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT ON ALL INSIDE AND OUTSIDE SURFACES.
3. USE 8" WALLS UP TO 6'-0" DEPTH, AND 1'-0" WALLS UP TO 8'-0" DEPTH.
4. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

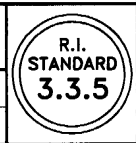
**BRICK/SOLID BLOCK DOUBLE GRATE CATCH BASIN  
 GRATE PERPENDICULAR TO EDGE OF PAVEMENT**

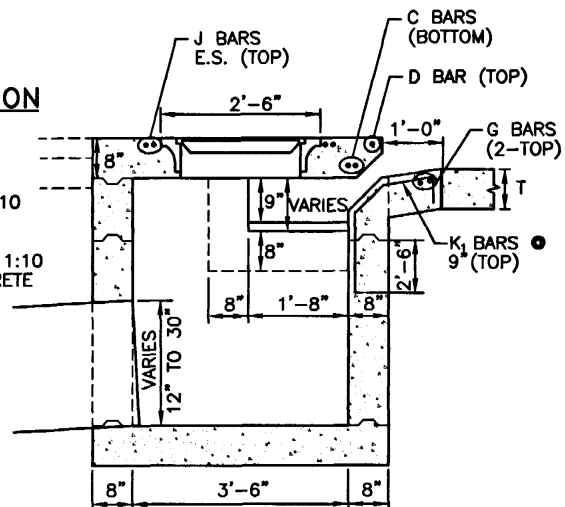
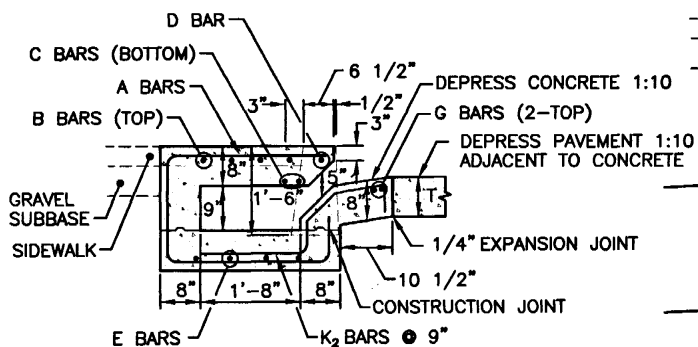
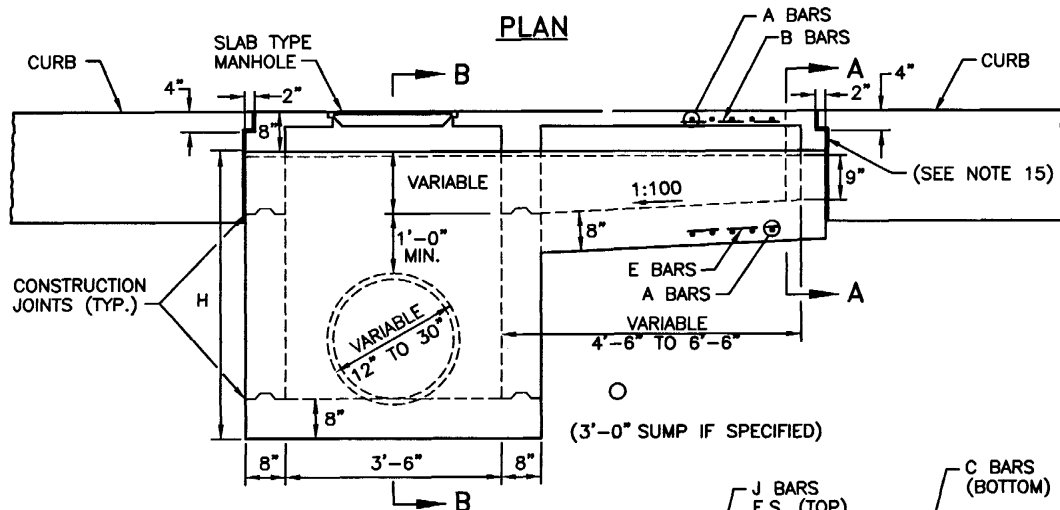
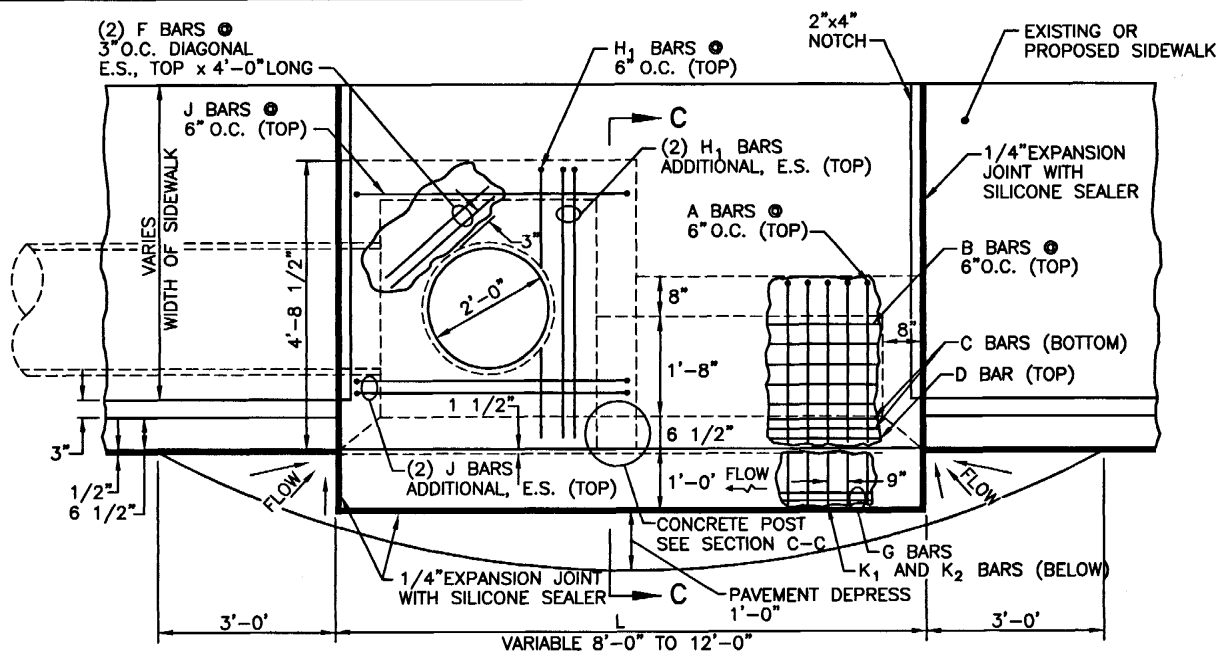
REVISIONS		
NO.	BY	DATE

*James A. Gagliardi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edward P. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





SHEET 1 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

## HIGH CAPACITY INLET

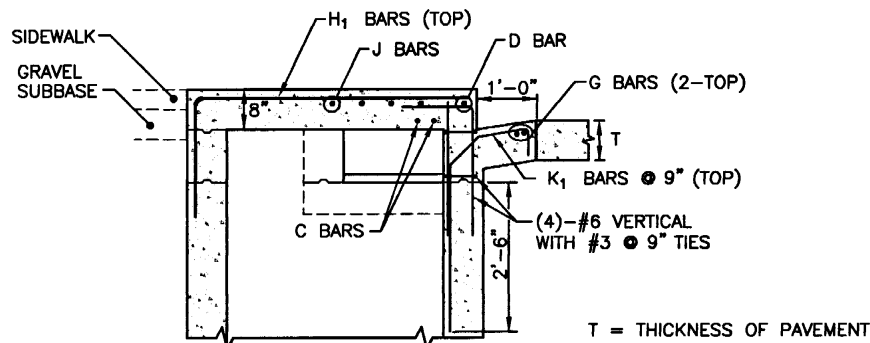
REVISIONS		
NO.	BY	DATE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

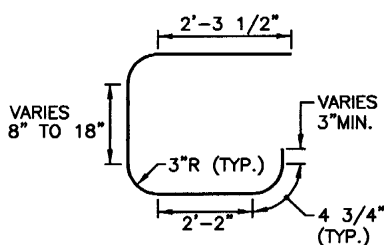
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

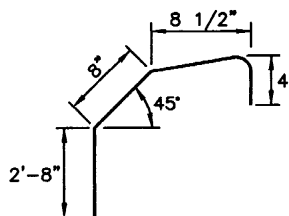
**R.I.  
STANDARD  
3.3.6A**



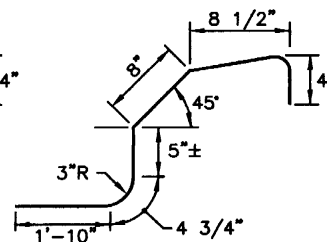
SECTION C-C



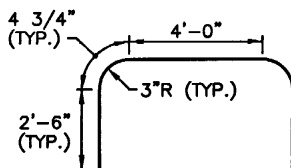
A BARS



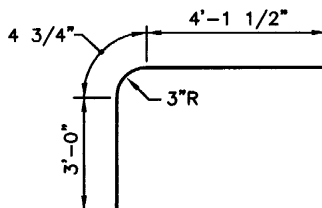
K<sub>1</sub> BARS



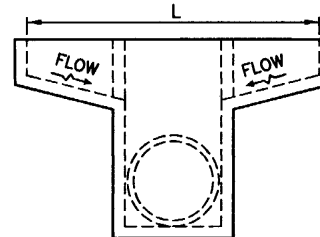
K<sub>2</sub> BARS



J BARS



H<sub>1</sub> BARS



NOTE: SKETCH SHOWS USE OF INLET SAGS.  
BOTH SIDES TO BE SYMMETRICAL.

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/4" EXPANSION JOINT NOT NECESSARY WHEN FLEXIBLE PAVEMENT IS USED FOR SIDEWALK OR ROADWAY.
3. THE COVERING FOR ALL REINFORCING STEEL SHALL BE 2", MEASURED FROM THE SURFACE OF THE CONCRETE TO THE FACE OF THE BAR, UNLESS OTHERWISE SHOWN.
4. THE HIGH CAPACITY INLET DETAILED HEREIN IS FOR USE ON A GRADE. IF IT IS TO BE USED IN A SAG, (SEE SKETCH HEREIN), IT SHOULD BE BUILT SYMMETRICALLY ABOUT THE CENTERLINE OF THE PIPE AND LENGTH OF OPENING SPECIFIED.
5. THE TYPE AND SIZE OF PIPE TO BE USED WITH THIS INLET SHALL BE THE TYPE AND SIZE AS CALLED FOR ON THE PLANS.
6. TYPICAL "KEYED" CONSTRUCTION JOINTS ARE SHOWN ON THE DETAILS HEREIN. OTHER "KEYED" OR "DOWELED" TYPE CONSTRUCTION JOINTS MAY BE USED IF ACCEPTABLE TO THE ENGINEER.
7. THE BEARING AREA OF FRAME AND COVER SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT FOR THE ENTIRE COVER IN THE FRAME. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING, AND THE COVER SHALL SEAT IN ITS FRAME WITHOUT ROCKING.
8. ALL REINFORCING BARS SHALL BE EPOXY COATED.
9. A SLAB TYPE MANHOLE AND STD. 7.1.0 PRECAST CURB TO BE USED WITH HIGH CAPACITY INLET.
10. THE BELL OR GROOVE OF CONCRETE PIPE CANNOT BE USED INSIDE THE INLET. IT MUST BE CUT OFF.
11. ALL EXPOSED EDGES AT CONSTRUCTION JOINTS SHALL BE BEVELED 3/4".
12. WHEN DEEMED NECESSARY, WEEP HOLES MAY BE INSTALLED IN THE SIDEWALLS OF INLETS DURING CONSTRUCTION TO PROVIDE BASE COURSE DRAINAGE PRIOR TO PLACEMENT OF PAVEMENT. THESE WEEP HOLES SHALL BE LOCATED AT OR BELOW SUBGRADE ELEVATION AS DIRECTED OR APPROVED BY THE ENGINEER TO PROPERLY DRAIN SUBSURFACE MATERIAL.
13. IF HIGH CAPACITY INLET IS TO BE CONSTRUCTED ALONG WITH A SIDEWALK, THE SIDEWALK SHALL BE CONSTRUCTED MONOLITHIC WITH THE TOP SLAB ON THE INLET. THE SIDEWALK SHALL BE REINFORCED WITH WELDED WIRE MESH 6x6-W2.9xW2.9 PLACED 2" BELOW SURFACE OF SIDEWALK AND EXTENDED INTO THE TOP SLAB OF THE INLET A MINIMUM DISTANCE OF 8".
14. BAR SIZES - B BARS, C BARS, D BARS, E BARS, F BARS, G BARS K<sub>1</sub> BARS AND K<sub>2</sub> BARS ARE ALL TO BE #5 BARS. H<sub>1</sub> BARS AND J BARS ARE ALL TO BE #6 BARS. A BARS ARE TO BE #7 BARS.
15. THE COST TO NOTCH THE CURB SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CURBING.

SHEET 2 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

HIGH CAPACITY INLET

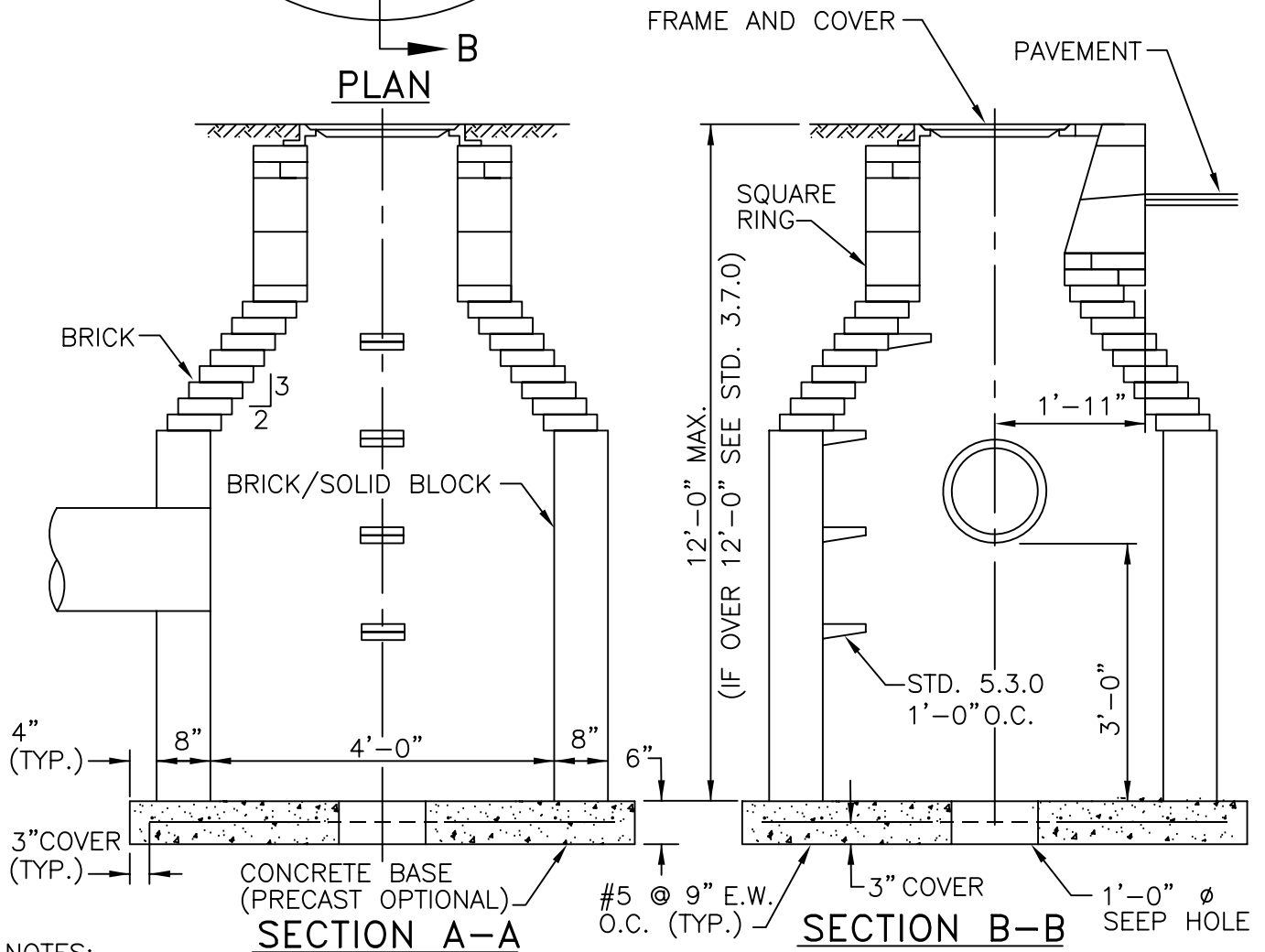
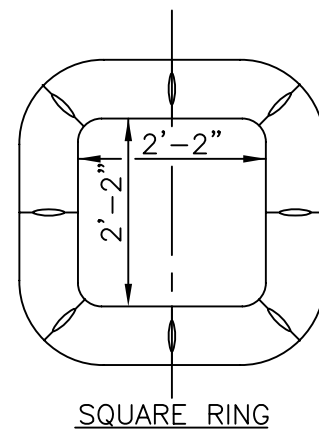
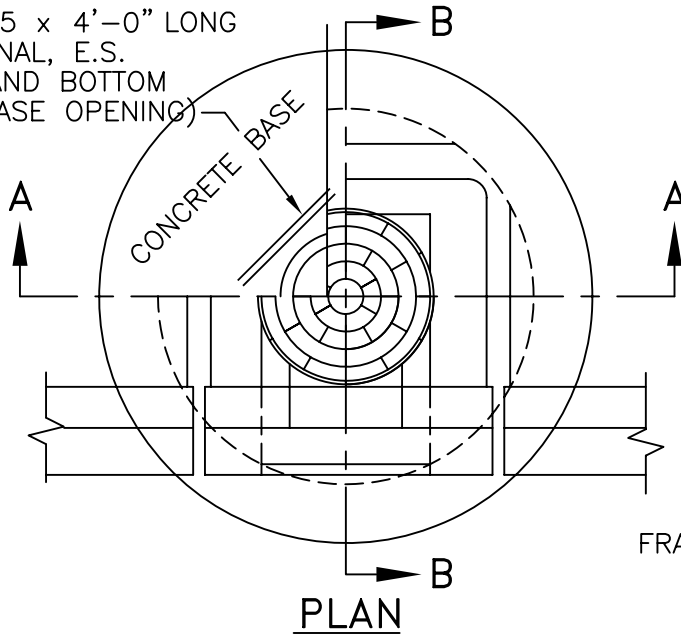
*John R. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Porter Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



(2)-#5 x 4'-0" LONG  
DIAGONAL, E.S.  
TOP AND BOTTOM  
(AT BASE OPENING)



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

**BRICK/SOLID BLOCK  
TYPE "D" ROUND CATCH BASIN**

*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

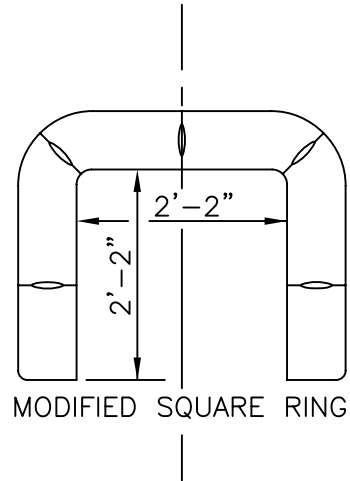
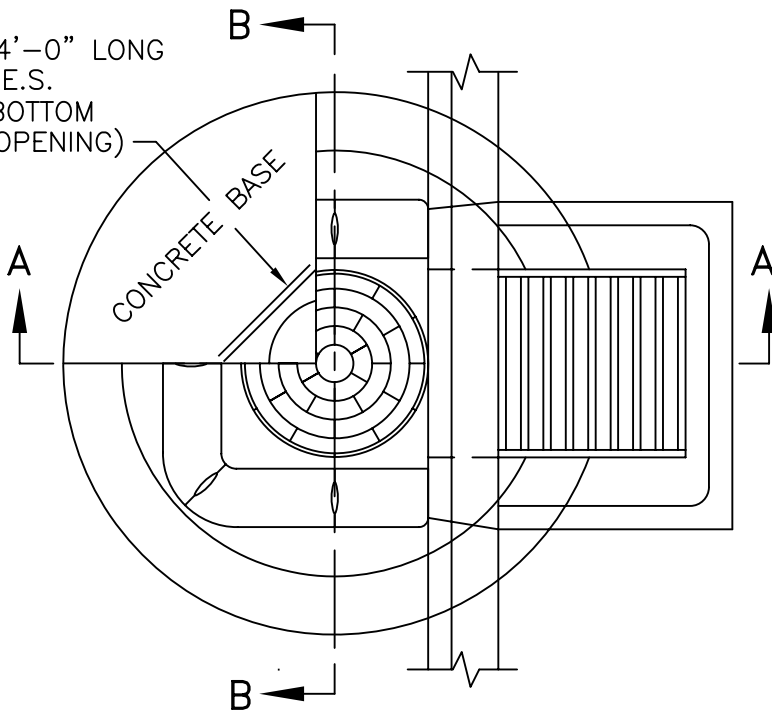
*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

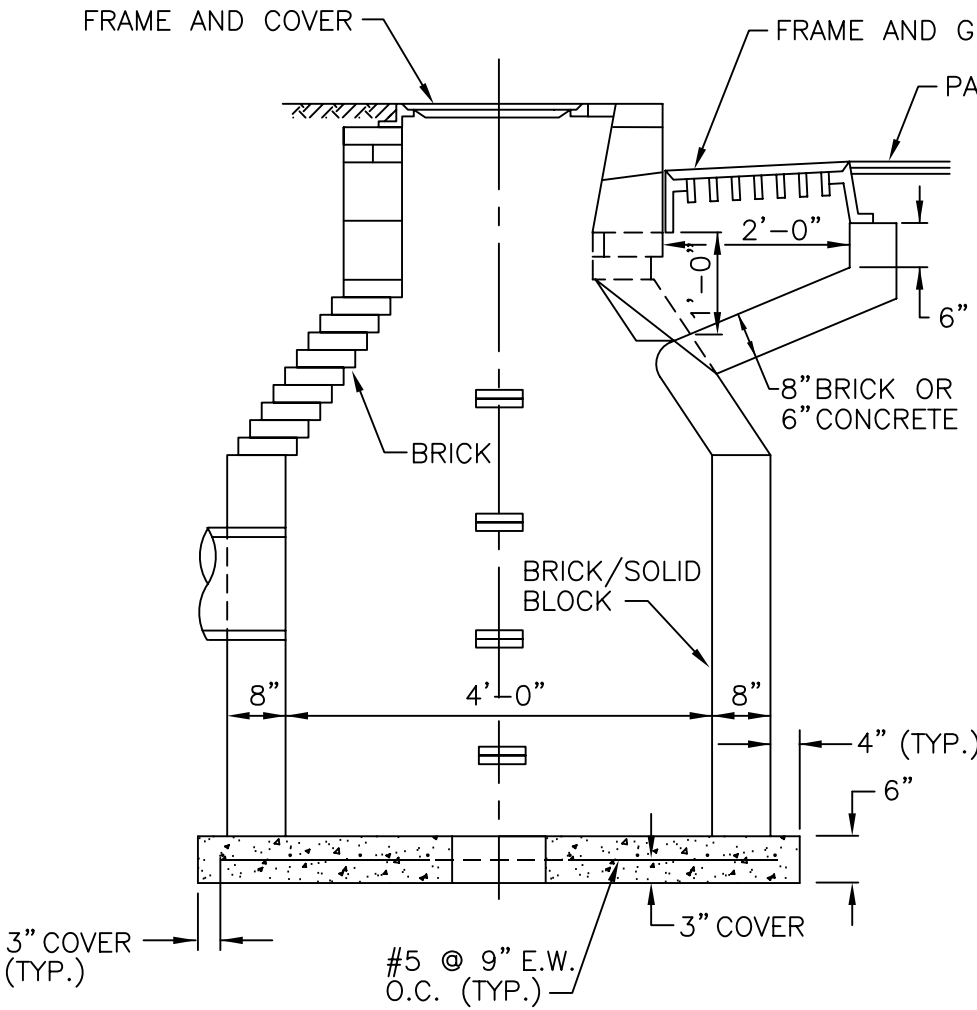




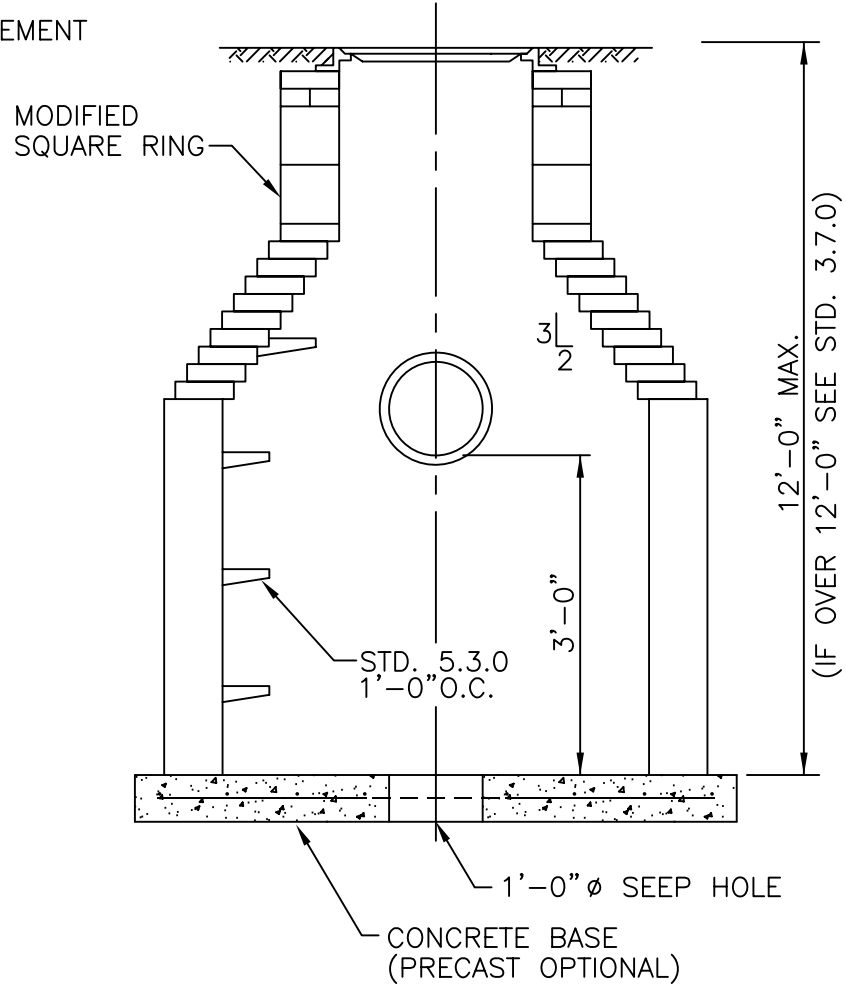
(2)-#5 x 4'-0" LONG  
DIAGONAL, E.S.  
TOP AND BOTTOM  
(AT BASE OPENING)



PLAN



SECTION A-A



SECTION B-B

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
  3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

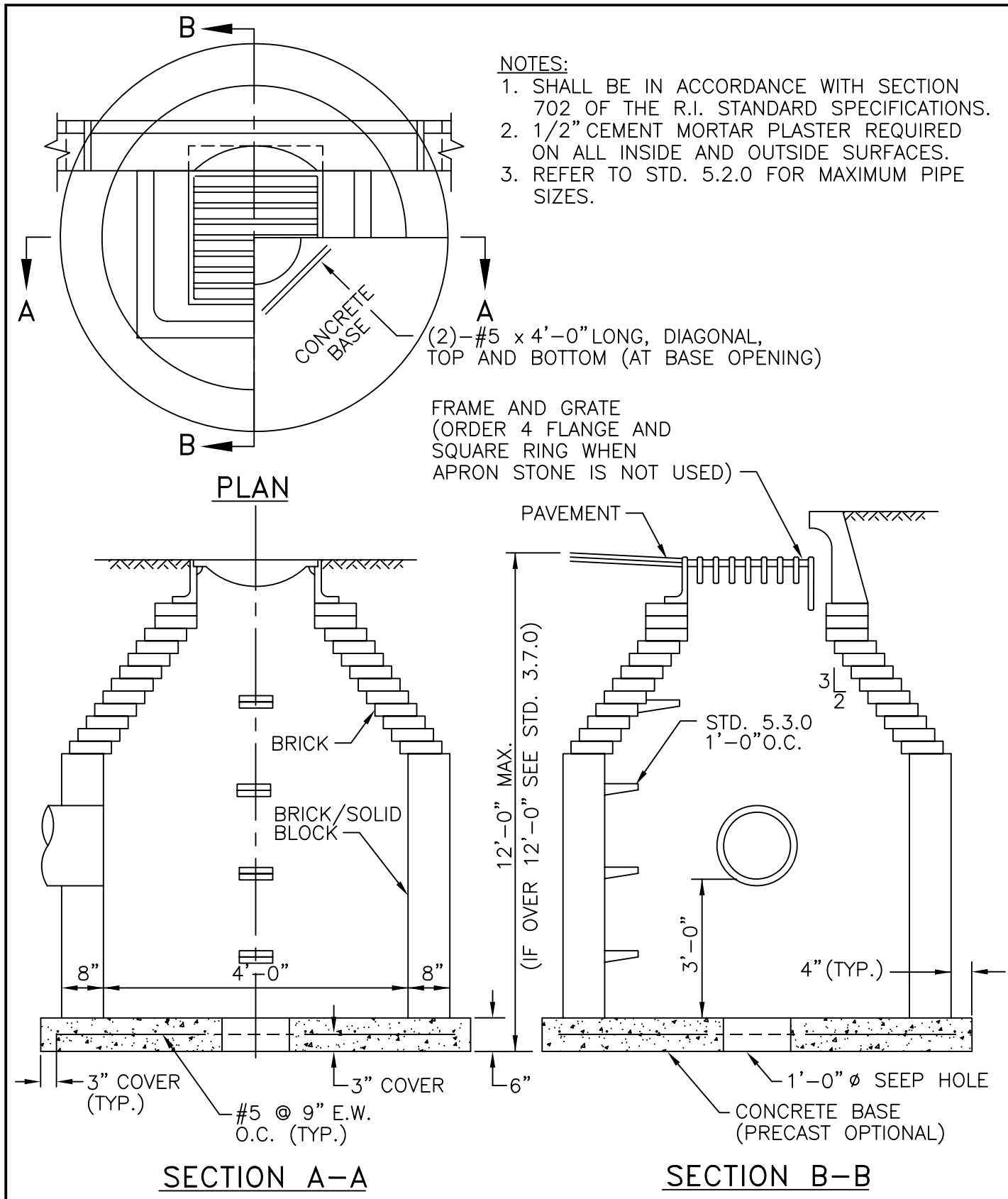
BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
3.4.1



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

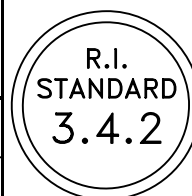
**BRICK/SOLID BLOCK  
TYPE "F" ROUND CATCH BASIN**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

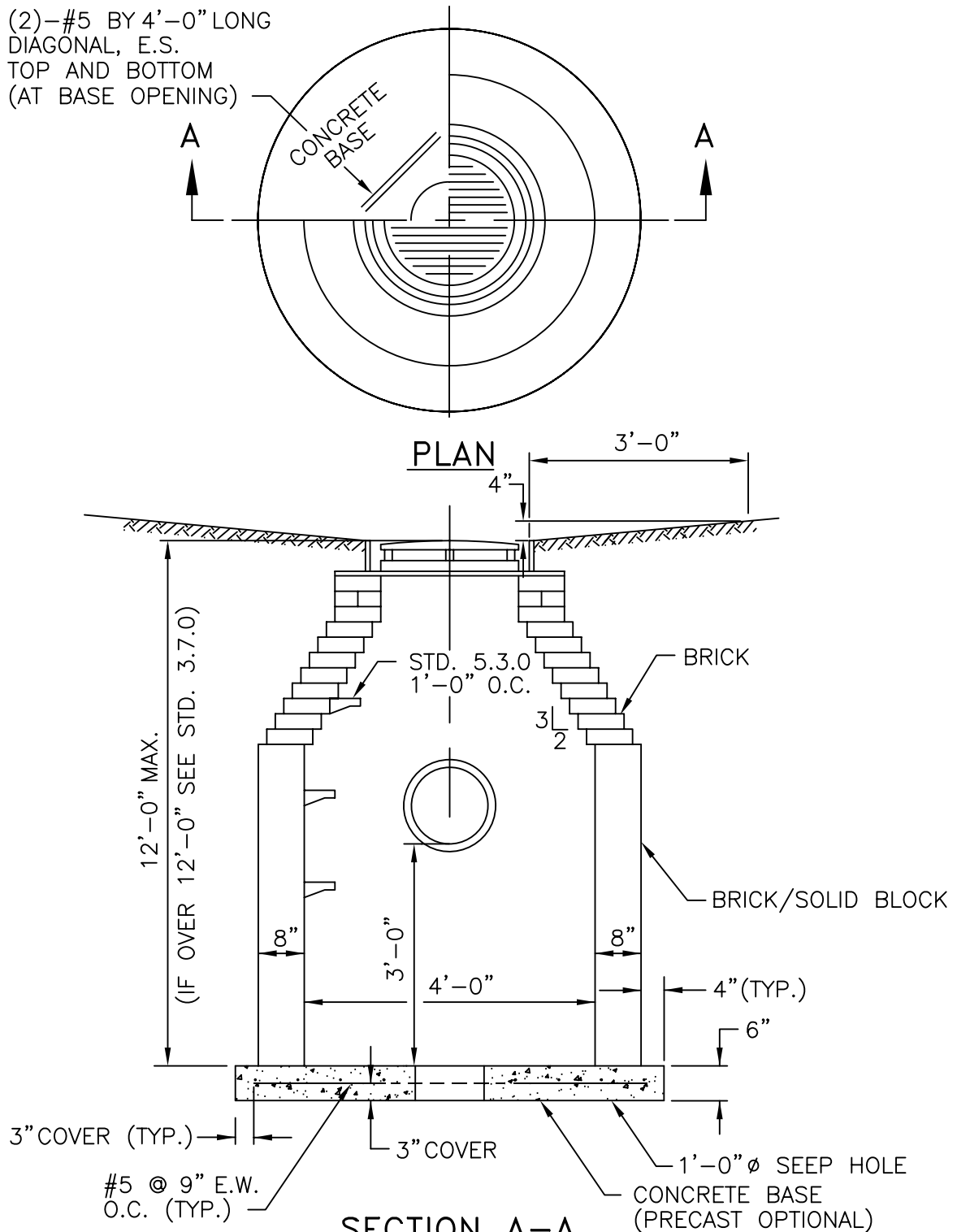
*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund D. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



(2)-#5 BY 4'-0" LONG  
DIAGONAL, E.S.  
TOP AND BOTTOM  
(AT BASE OPENING)





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			BRICK/SOLID BLOCK TYPE "R" CATCH BASIN		<div><div>R.I. STANDARD 3.4.3</div></div>
NO.	BY	DATE			
1	MLP	Mar 05			

  
CHIEF ENGINEER  
TRANSPORTATION

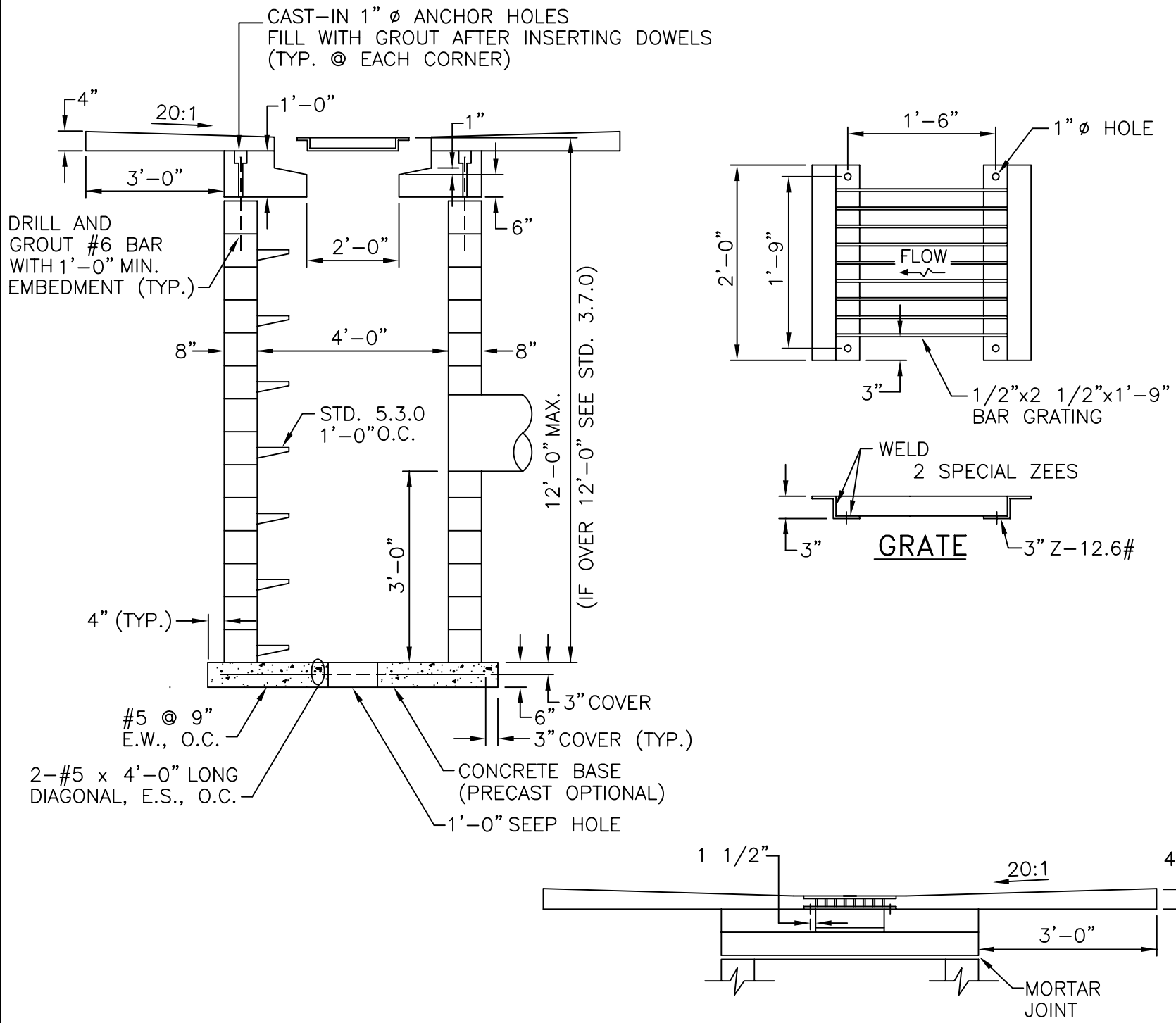
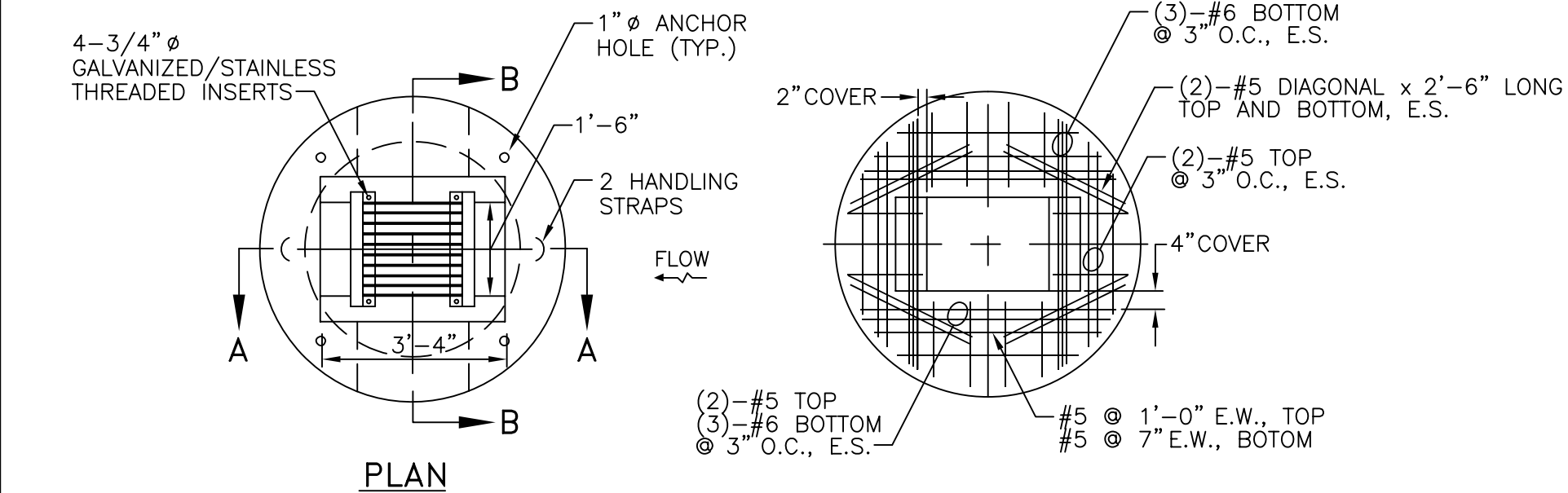
  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

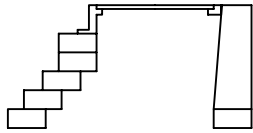
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

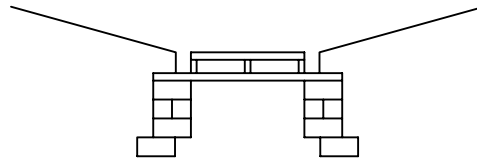


- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
  2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
  3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.
  4. ALL REINFORCING SHALL BE EPOXY COATED.

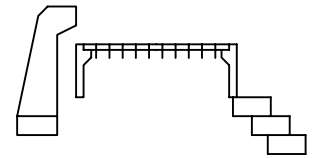
REVISIONS			RHODE ISLAND DEPARTMENT OF TRANSPORTATION		<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 3.4.4 </div>
NO.	BY	DATE	SOLID BLOCK FLUSH ROUND CATCH BASIN		
1	MLP	Mar 05			
 CHIEF ENGINEER TRANSPORTATION			 CHIEF DESIGN ENGINEER TRANSPORTATION		JUNE 15, 1998 ISSUE DATE



TYPE "D"

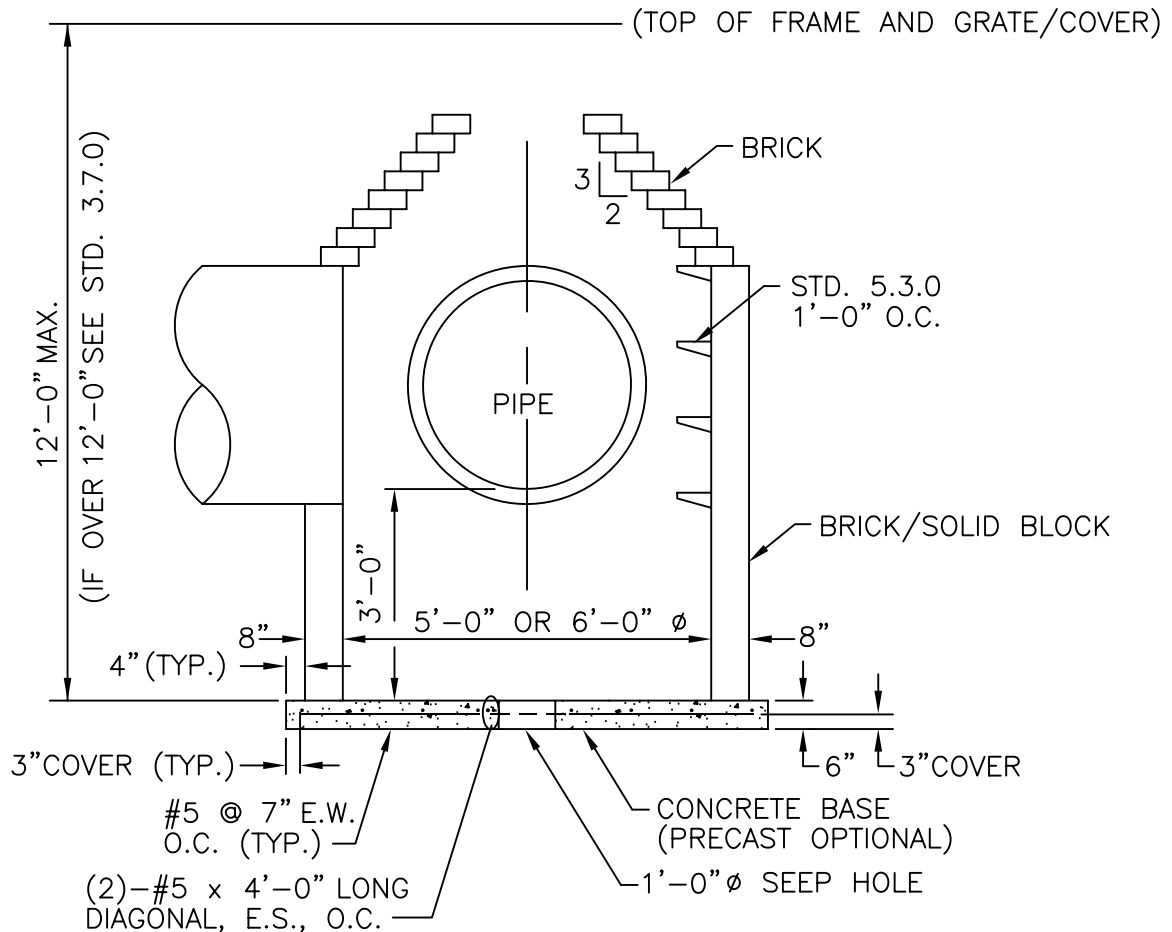


TYPE "R"



TYPE "F"

TYPE CATCH BASIN AS REQUIRED

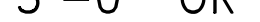



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN	<div><div>R.I. STANDARD 3.4.5</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		

  
CHIEF ENGINEER  
TRANSPORTATION

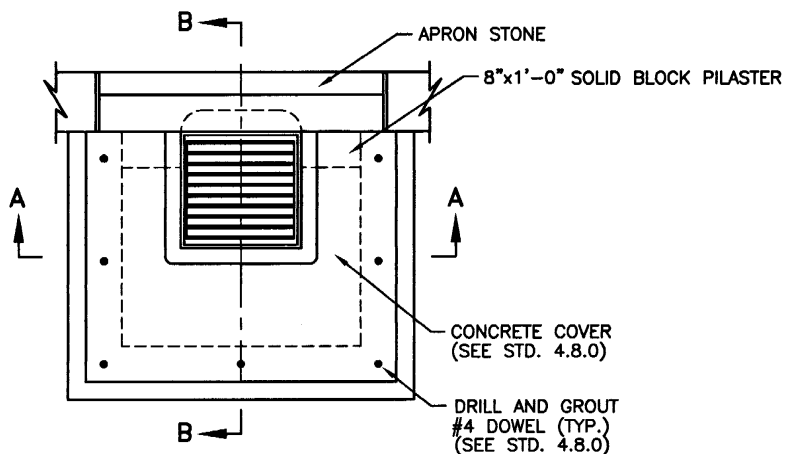
  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

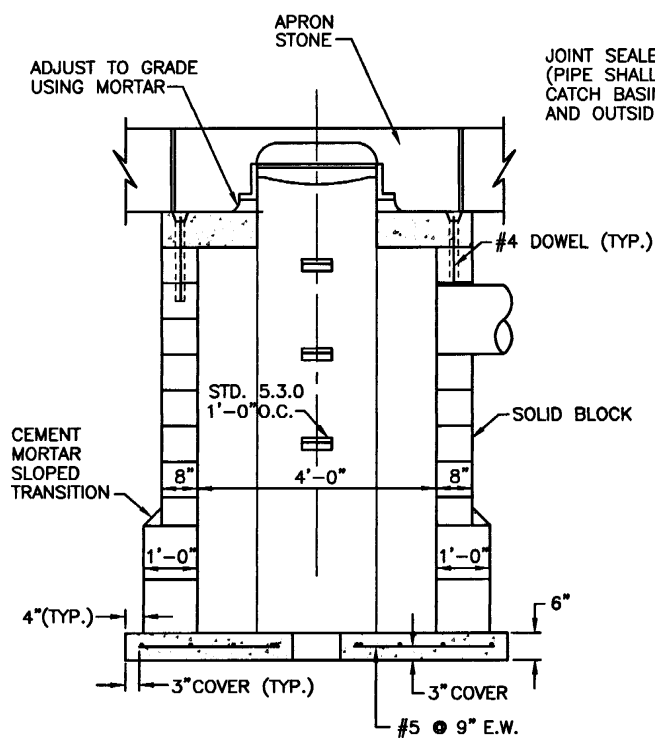
*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

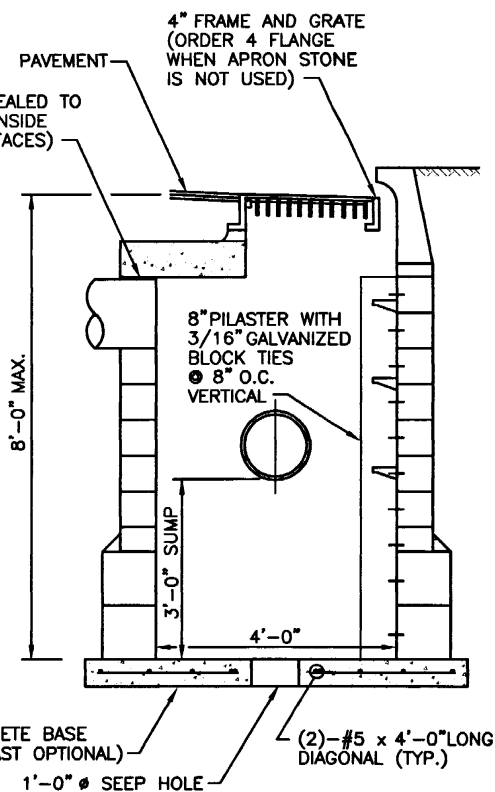
JUNE 15, 1998  
ISSUE DATE



PLAN



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN  
(PIPE COVER 1'-6" TO 3'-0")

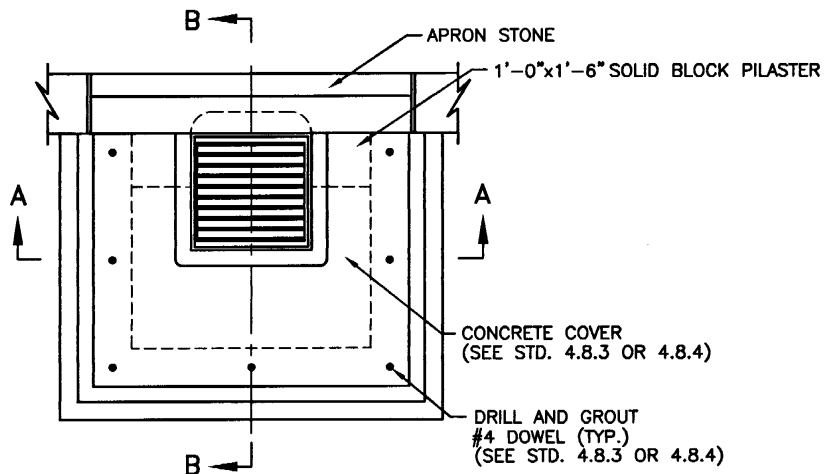
REVISIONS		
NO.	BY	DATE

*James D. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

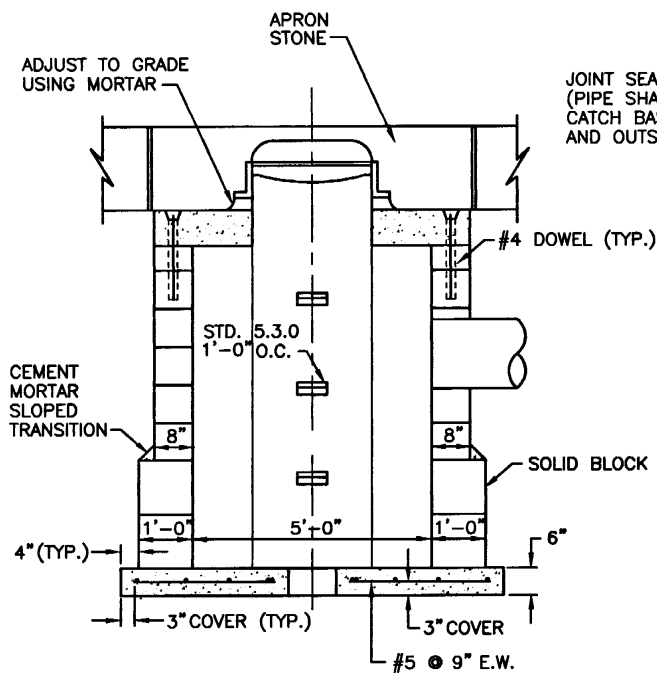
*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

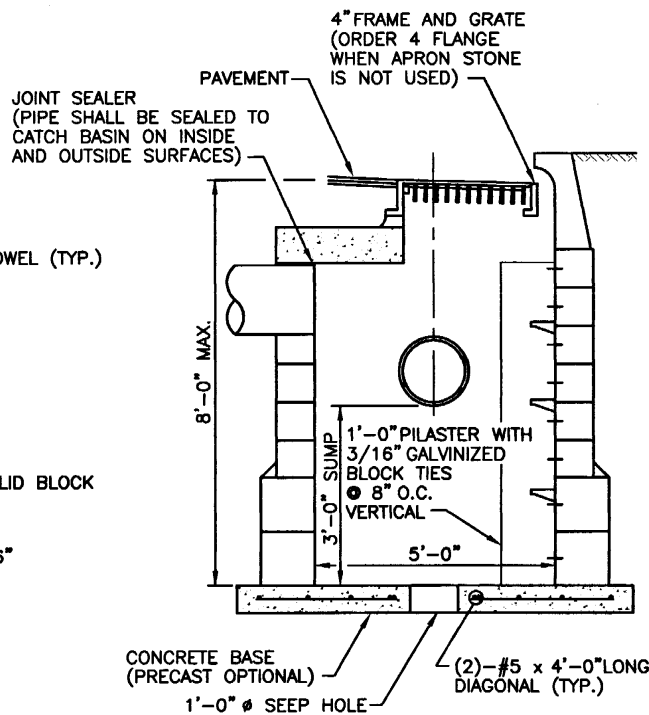




PLAN



SECTION A-A



SECTION B-B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, AS REQUIRED.
4. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

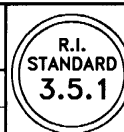
REVISIONS		
NO.	BY	DATE

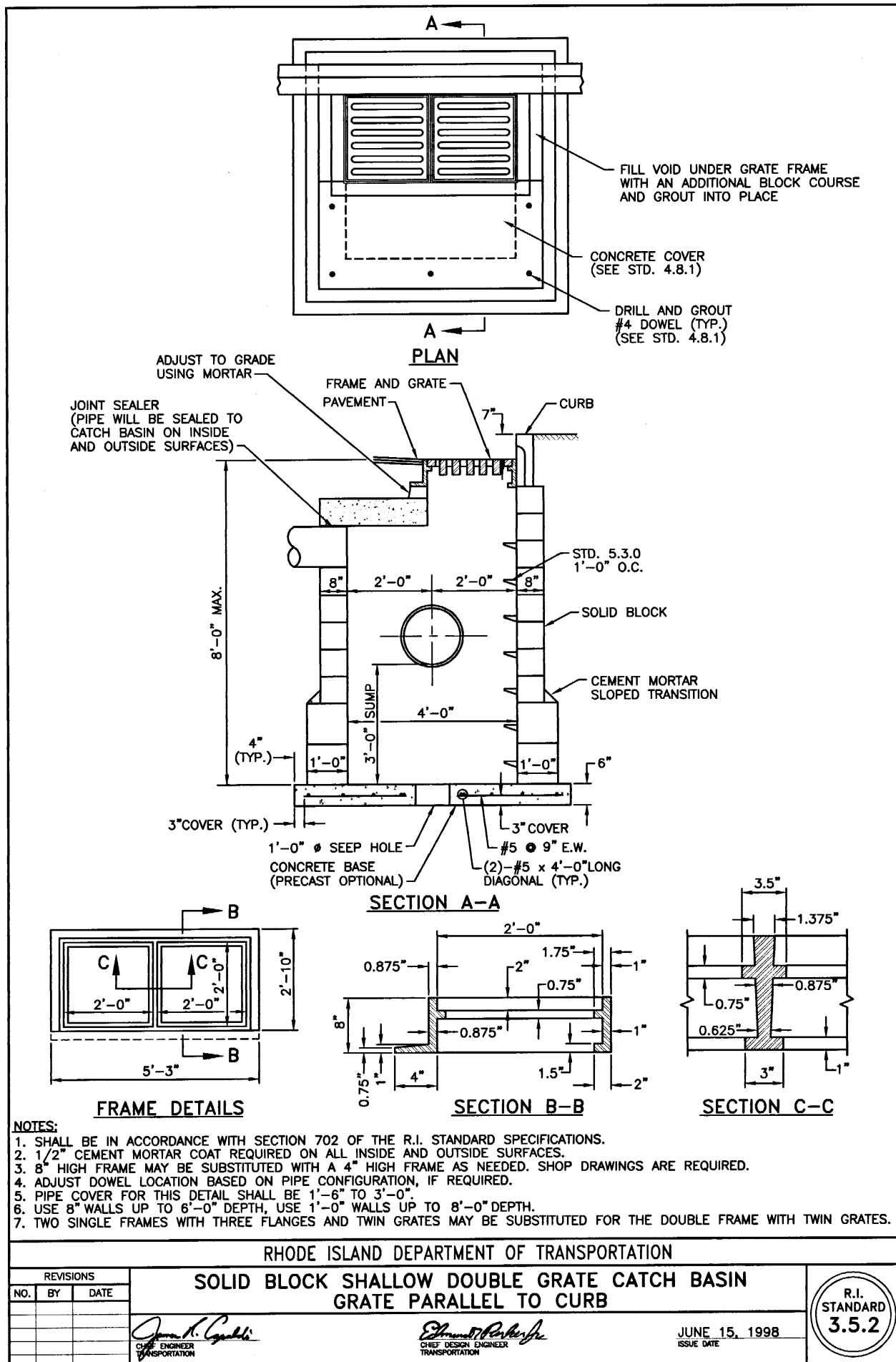
SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN  
(PIPE COVER 1'-6" TO 3'-0")

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

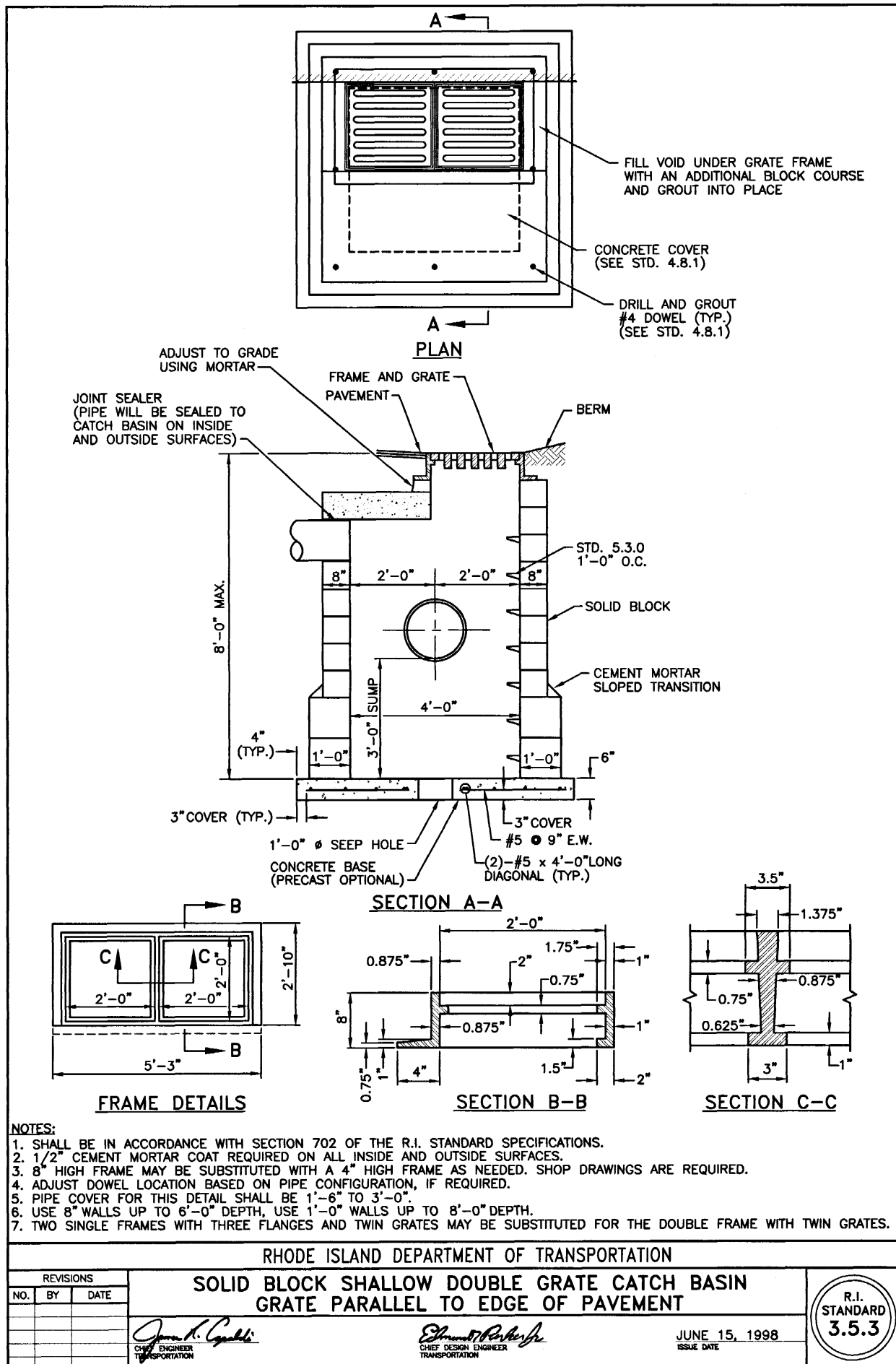
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

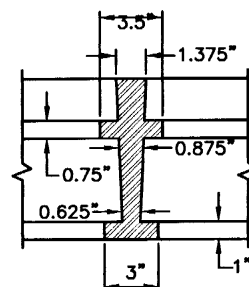
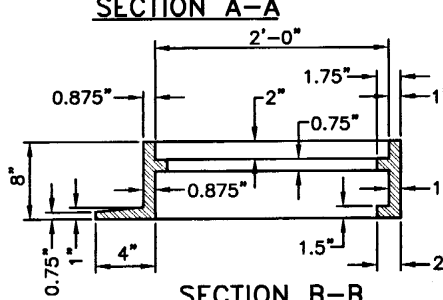
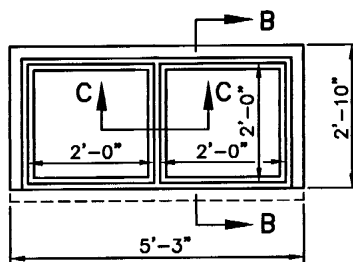
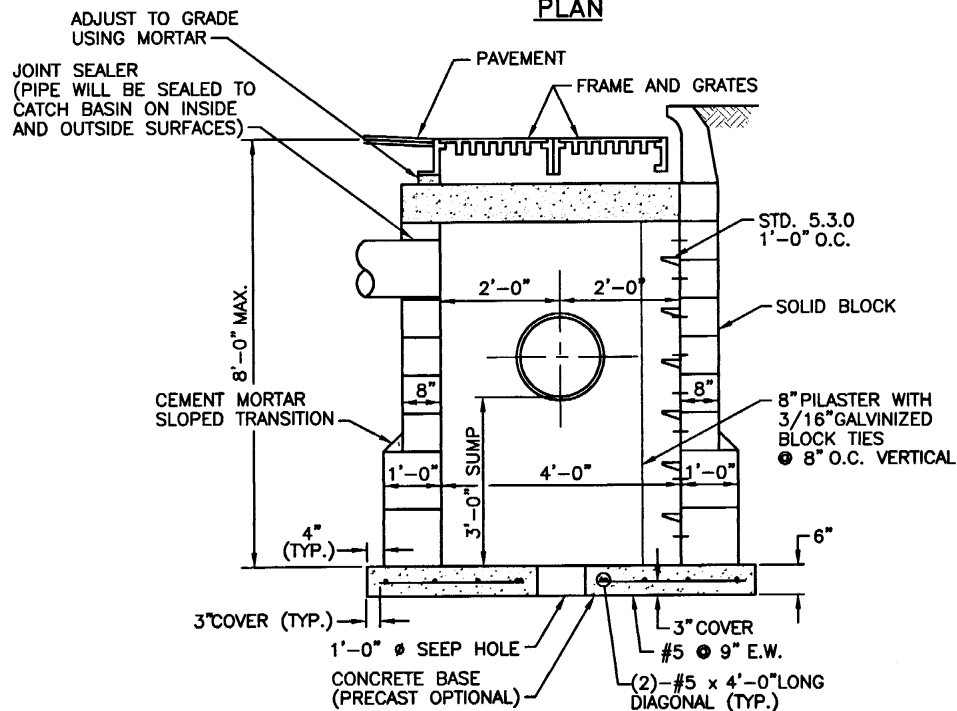
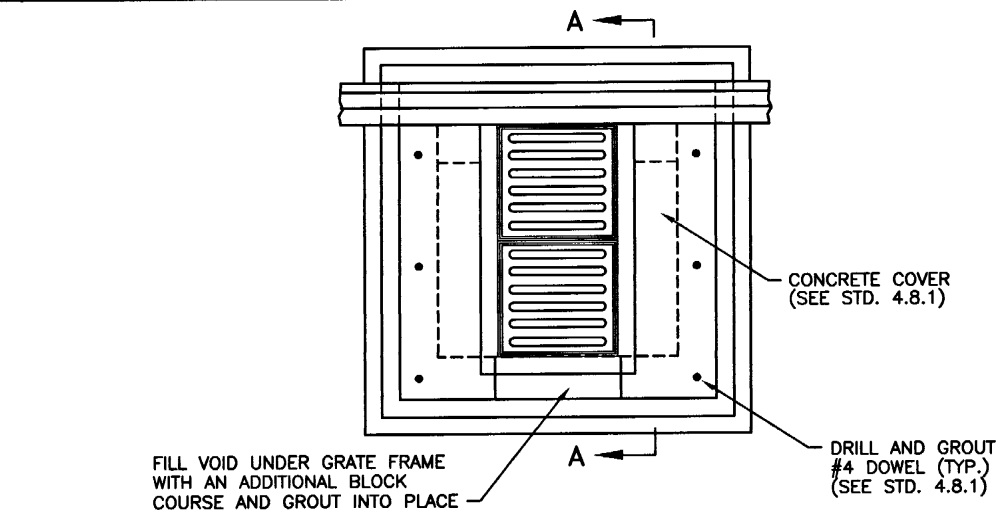
JUNE 15, 1998  
ISSUE DATE











NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

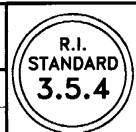
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN  
GRATE PERPENDICULAR TO CURB

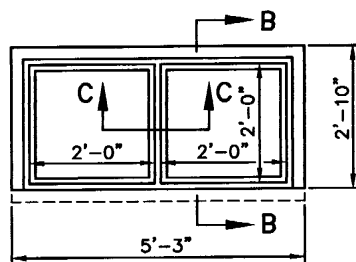
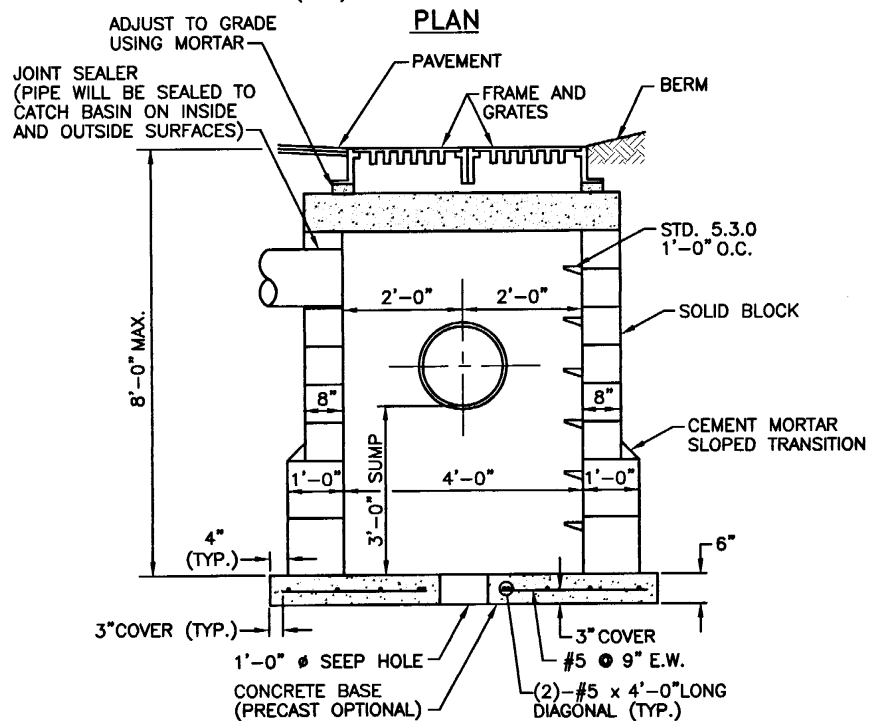
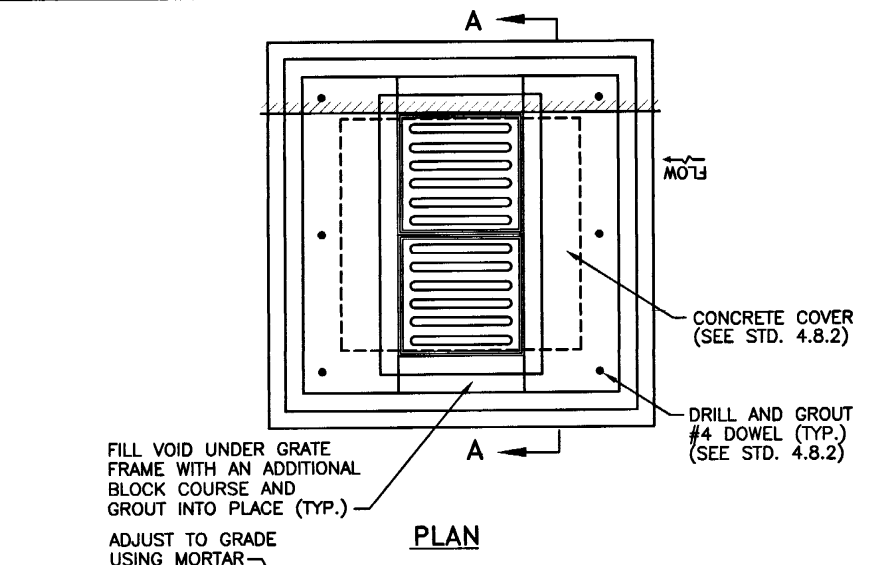
REVISIONS		
NO.	BY	DATE

*James R. Gault*  
CHIEF ENGINEER  
TRANSPORTATION

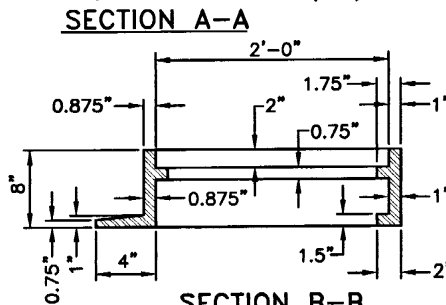
*Edward J. Palka*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

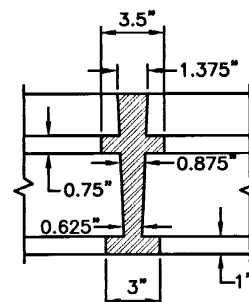




FRAME DETAILS



SECTION B-B



SECTION C-C

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.
3. 8" HIGH FRAME MAY BE SUBSTITUTED WITH A 4" HIGH FRAME AS NEEDED. SHOP DRAWINGS ARE REQUIRED.
4. ADJUST DOWEL LOCATION BASED ON PIPE CONFIGURATION, IF REQUIRED.
5. PIPE COVER FOR THIS DETAIL SHALL BE 1'-6" TO 3'-0".
6. USE 8" WALLS UP TO 6'-0" DEPTH, USE 1'-0" WALLS UP TO 8'-0" DEPTH.
7. TWO SINGLE FRAMES WITH THREE FLANGES AND TWIN GRATES MAY BE SUBSTITUTED FOR THE DOUBLE FRAME WITH TWIN GRATES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

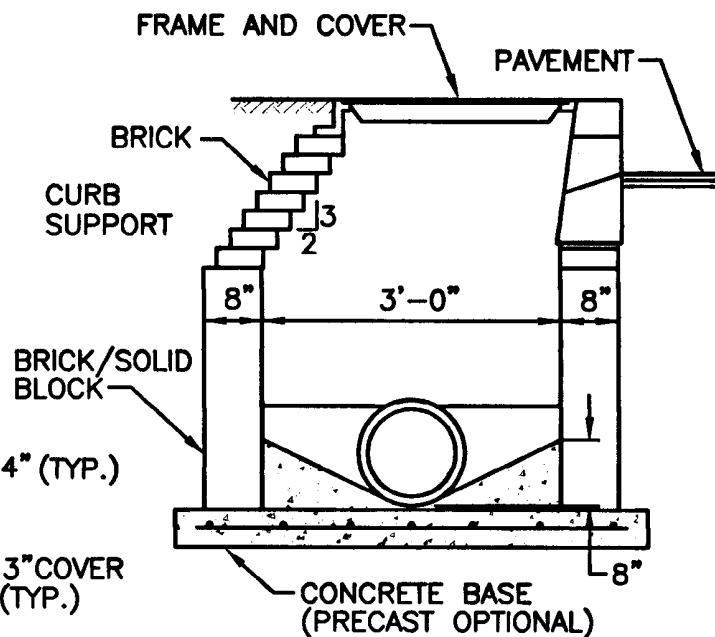
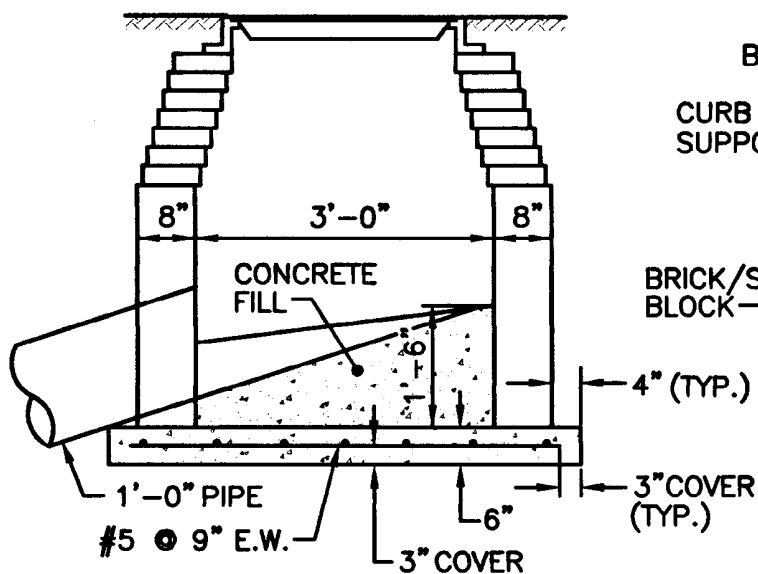
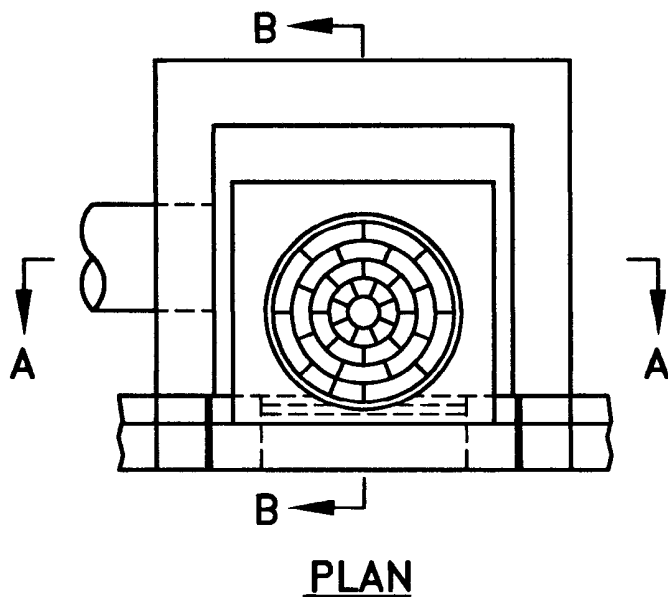
SOLID BLOCK SHALLOW DOUBLE GRATE CATCH BASIN  
GRATE PERPENDICULAR TO EDGE OF PAVEMENT

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward R. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/2" CEMENT MORTAR PLASTER COAT REQUIRED ON ALL INSIDE AND OUTSIDE SURFACES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**BRICK/SOLID BLOCK DROP INLET**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

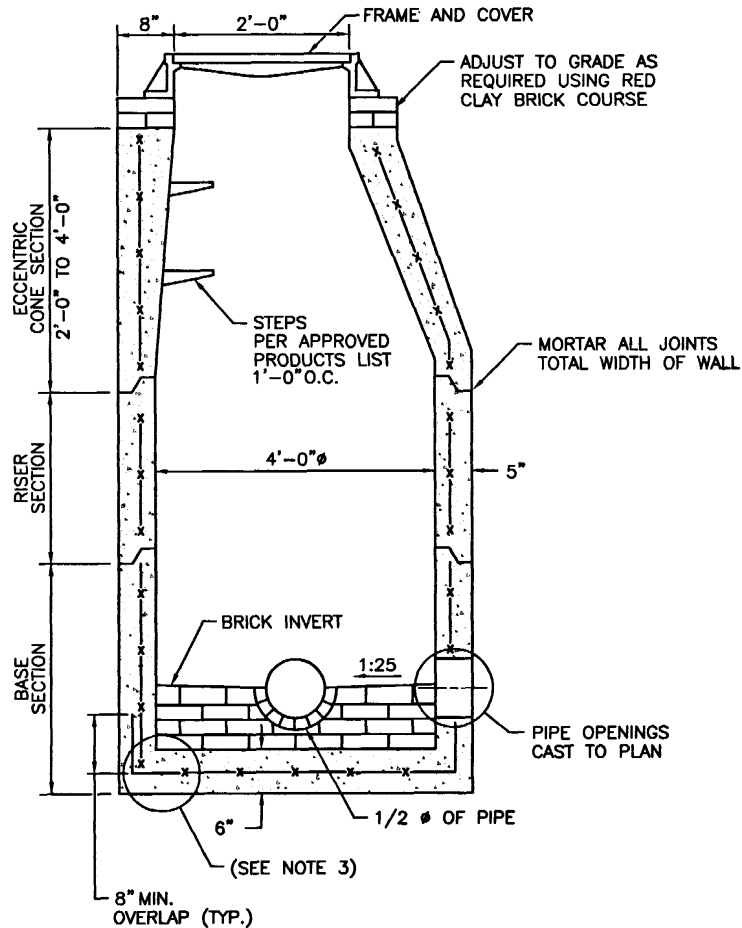
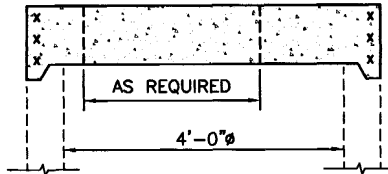
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





ALTERNATE TOP LOADING (SEE NOTES 7 AND 8)



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN. / LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST 4'-0" ROUND MANHOLE

REVISIONS		
NO.	BY	DATE

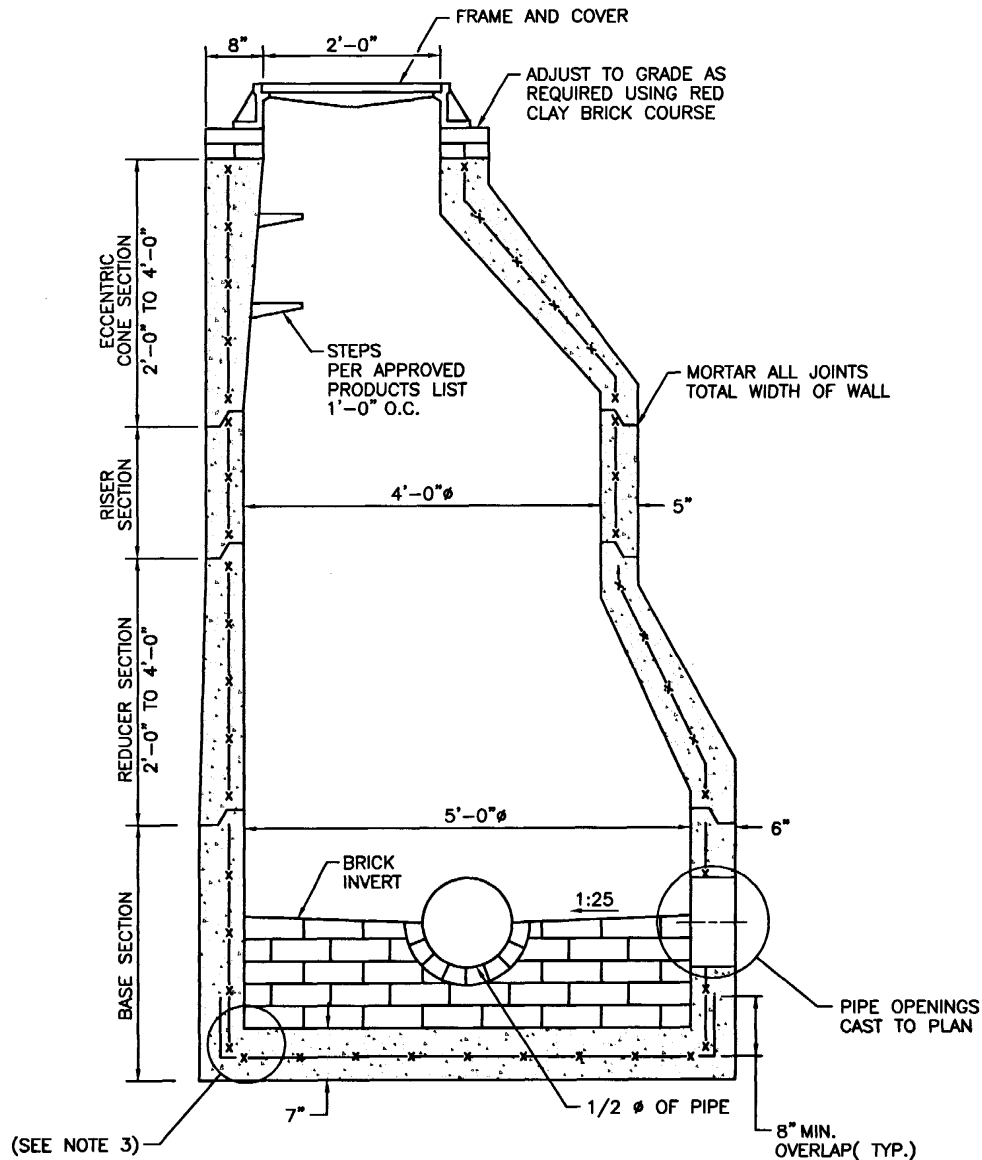
*James A. Gaudin*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund P. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



Diagram illustrating the reinforcement layout for a concrete slab. The top portion is labeled "AS REQUIRED" and the bottom portion is labeled "4'-0" OR 5'-0" Ø".



1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED = 0.15 SQ. IN./LIN. FT. MINIMUM.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. ONE POUR MONOLITHIC BASE SECTION.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
6. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.0).
8. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

PRECAST 5'-0" ROUND MANHOLE

REVISIONS		
NO.	BY	DATE

**CHINA ENGINEER**  
**TRANSPORTATION**

**CHIEF DESIGN ENGINEER  
TRANSPORTATION**

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
4.2.1





ADJUST TO GRADE AS REQUIRED  
USING RED CLAY BRICK COURSE

2'-0" MAX. COVER

REFER TO STD. 4.6.1 FOR TOP SLAB  
FOR ALTERNATE TOP SLAB MONOLITHIC  
WITH RISER SECTION, SEE STD. 4.6.2

MORTAR ALL  
JOINTS TOTAL  
WITH OF WALL

#4 @ 8"  
E.F., HORIZONTAL

STD. 5.3.0  
1'-0" O.C.

#4 @ 9"  
E.F., VERTICAL

#4 @ 9"  
E.F., VERTICAL

REINFORCED CONCRETE  
PLUG FOR SLOTTED HOLES

#4 @ 8"  
E.W., HORIZONTAL

SLOTTED HOLES  
WILL BE PERMITTED  
(SEE NOTE 9)

CATCH BASIN WIDTH (C)	A	B
4'-0"	8"	8"
6'-0"	9"	9"

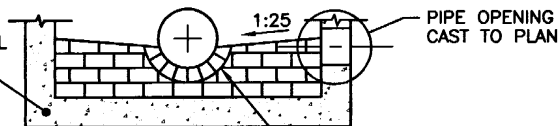
#4 @ 9"  
E.W., BOTTOM

#5 @ 9"  
E.W., TOP

STANDARD ACI HOOK

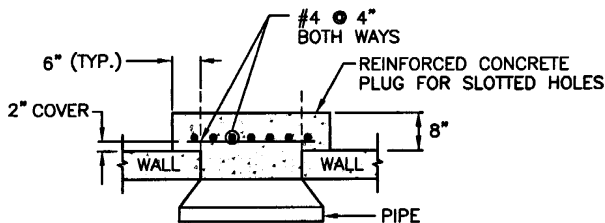
### CATCH BASIN

FOR REINFORCING STEEL  
SEE CATCH BASIN



### MANHOLE

1/2" Ø OF PIPE



### SECTION B-B

ALTERNATE POSITIONING  
OF VERTICAL BARS

### SECTION A-A

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
4. TOP SLAB, RISER AND BASE SECTIONS HAVE BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB, RISER AND BASE SECTIONS ARE DESIGNED FOR AXLE LOAD OF NO GREATER THAN 20 TONS.
5. THERE IS TO BE 2" MINIMUM COVER ON ALL REBAR.
6. ALL REBARS ARE TO HAVE MINIMUM 2" CLEARANCE FROM OPENING.
7. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
8. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'-7".
9. WHERE THE CLEARANCE FROM THE TOP OF THE PIPE TO THE RIM IS "B" OR LESS, PLUGS SHALL BE USED IN CONJUNCTION WITH SLOTTED HOLES. NO SLOTTED HOLE WILL BE PERMITTED WHERE THE CLEARANCE IS GREATER THAN 8". IN CASES WHERE SLOTTED HOLES ARE NOT USED AND THE WALL OPENING COMES WITHIN 1'-3" OF THE RIM, AN ADDITIONAL #8 BAR SHALL BE USED ABOVE THE OPENING THE WIDTH "C" OF THE WALL.

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN

REVISIONS		
NO.	BY	DATE

*James K. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Porter*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



ALTERNATE TOP SLAB (SEE NOTES 10 AND 11)

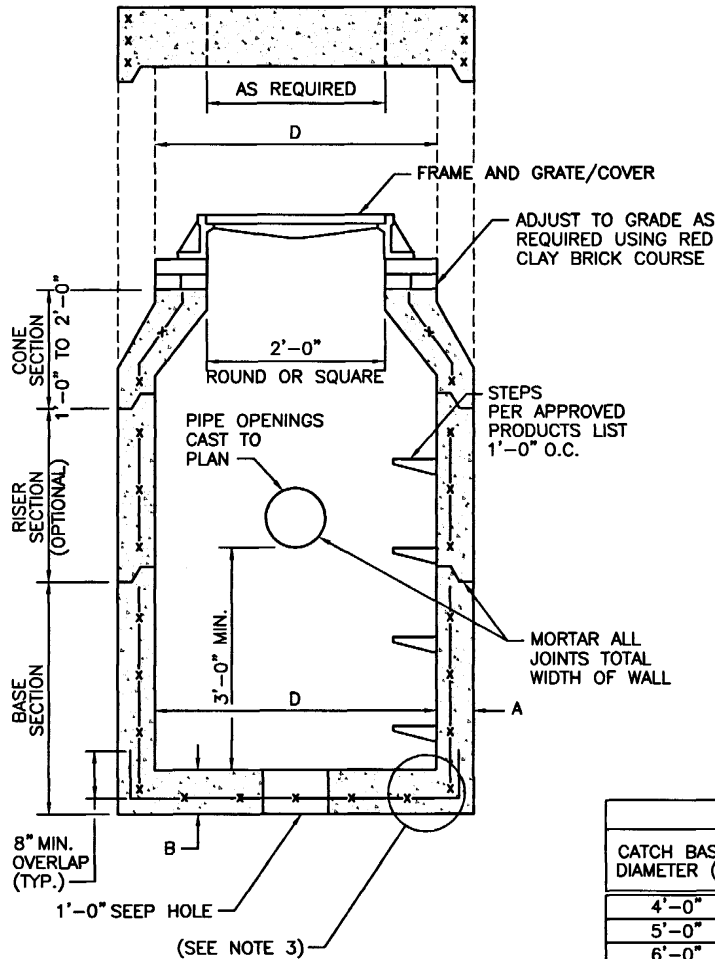
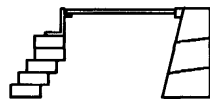


TABLE 1			
CATCH BASIN DIAMETER (D)	A	B	CIRCUMFERENTIAL STEEL REINFORCEMENT REQUIRED*
4'-0"	5"	6"	0.12 SQ. IN./LIN. FT.
5'-0"	6"	7"	0.15 SQ. IN./LIN. FT.
6'-0"	7"	8"	0.18 SQ. IN./LIN. FT.

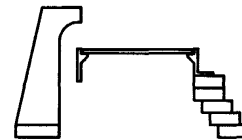
\* FOR LONGITUDINAL (VERTICAL STANDING) REINFORCEMENT REFER TO ASTM C478, ITEM 8.1.2



TYPE "D"



TYPE "R"



TYPE "F"

TYPE CATCH BASIN AS REQUIRED

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE TABLE 1 FOR STEEL REINFORCEMENT REQUIREMENTS.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ONE POUR MONOLITHIC BASE SECTION.
6. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
7. CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE 4'-0" CATCH BASIN ONLY.
8. FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE.
9. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
10. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
11. ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
12. REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

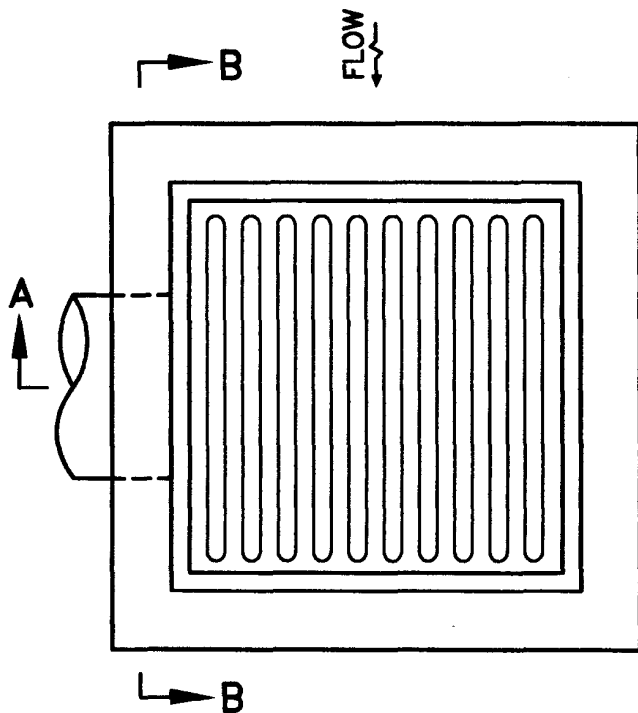
PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward P. Kelly*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
4.4.0

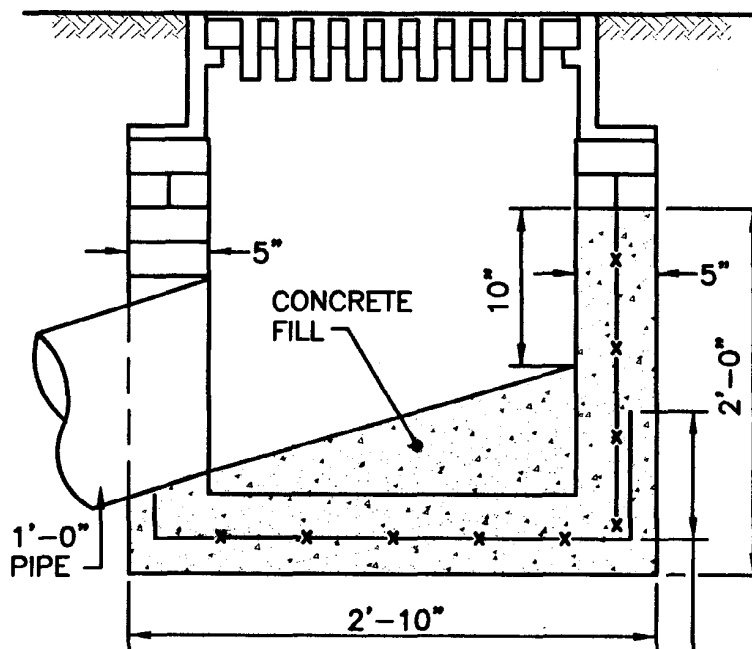


**NOTES:**

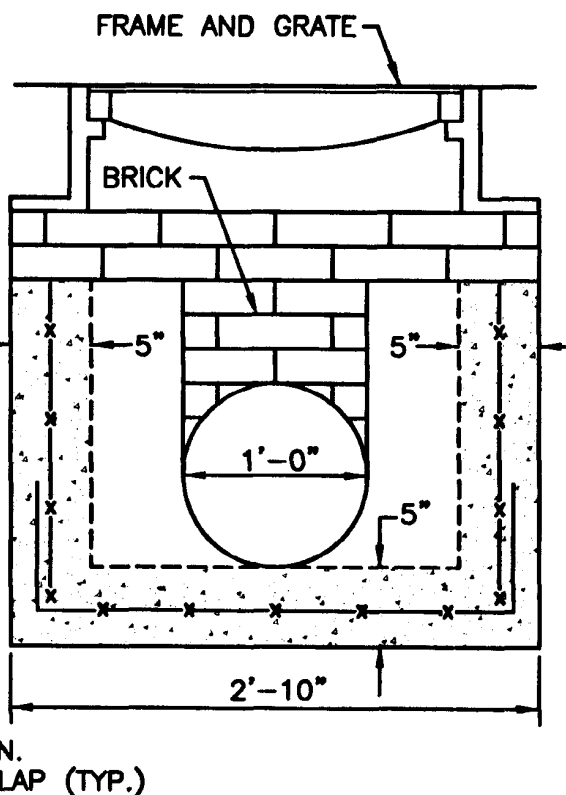
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-36"	3/4"

**PLAN**



**SECTION A-A**



**SECTION B-B**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE DROP INLET**

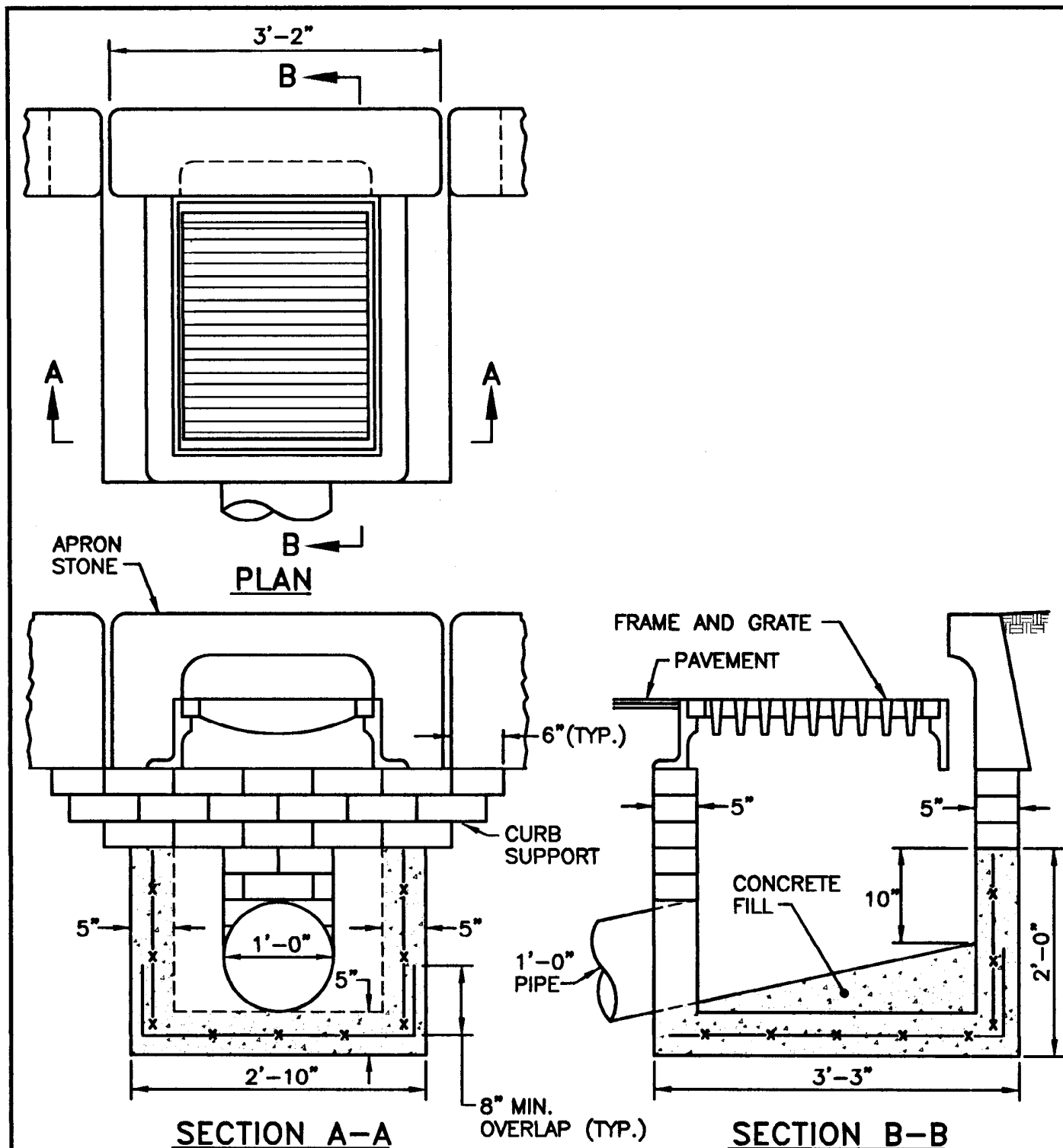
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE DROP INLET  
LATERAL OUTLET**

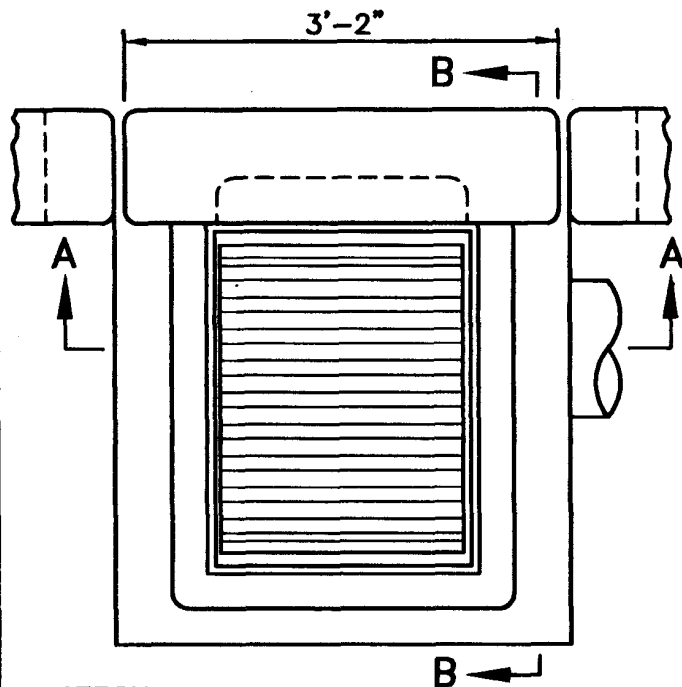
REVISIONS		
NO.	BY	DATE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

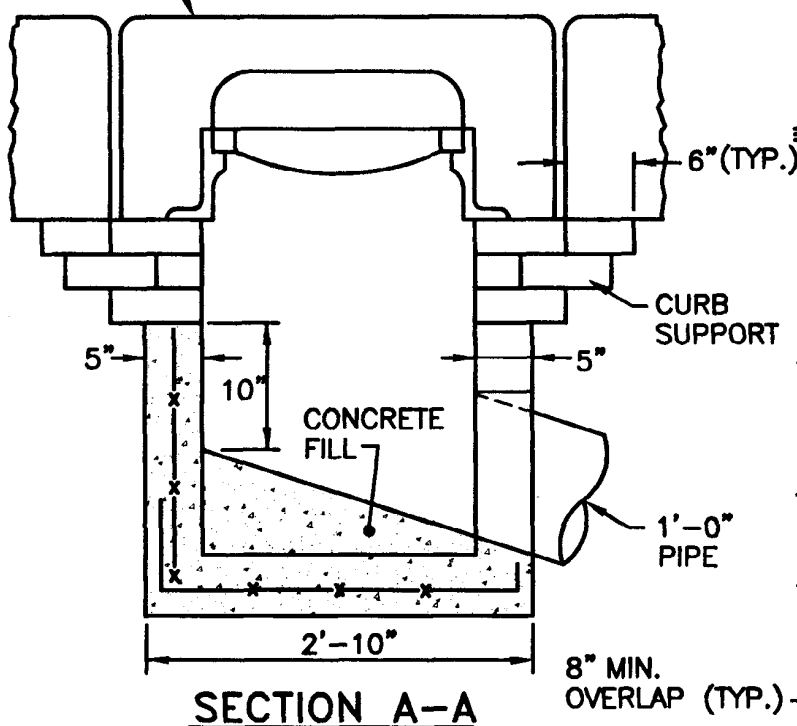
JUNE 15, 1998  
ISSUE DATE



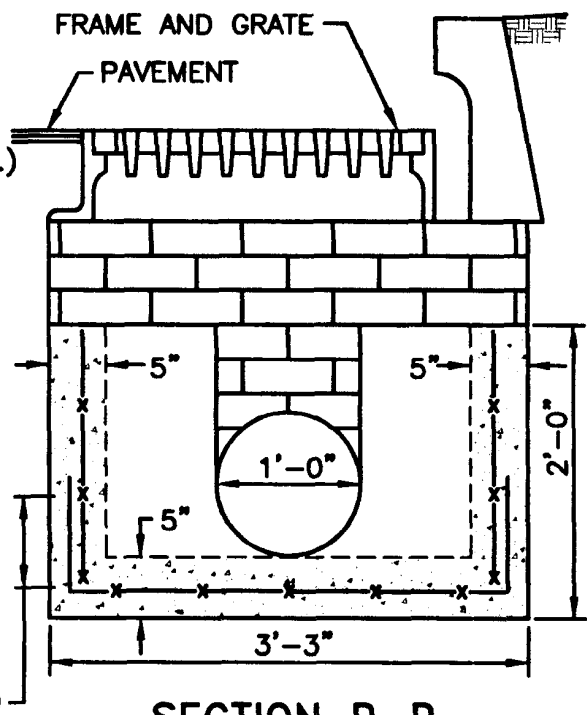


APRON  
STONE

**PLAN**



**SECTION A-A**



**SECTION B-B**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.12 SQ. IN./LIN. FT. (EACH WAY).
3. MINIMUM COVER ON REINFORCEMENT SHALL BE 2".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE DROP INLET  
LONGITUDINAL OUTLET**

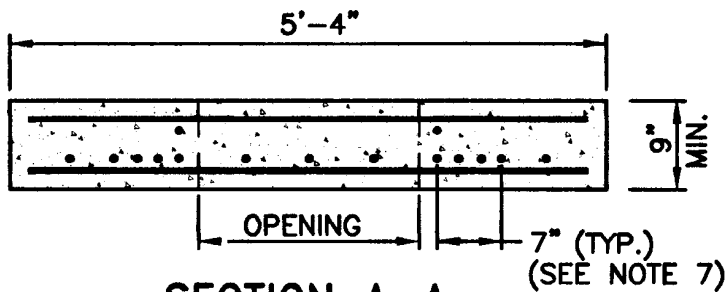
REVISIONS		
NO.	BY	DATE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

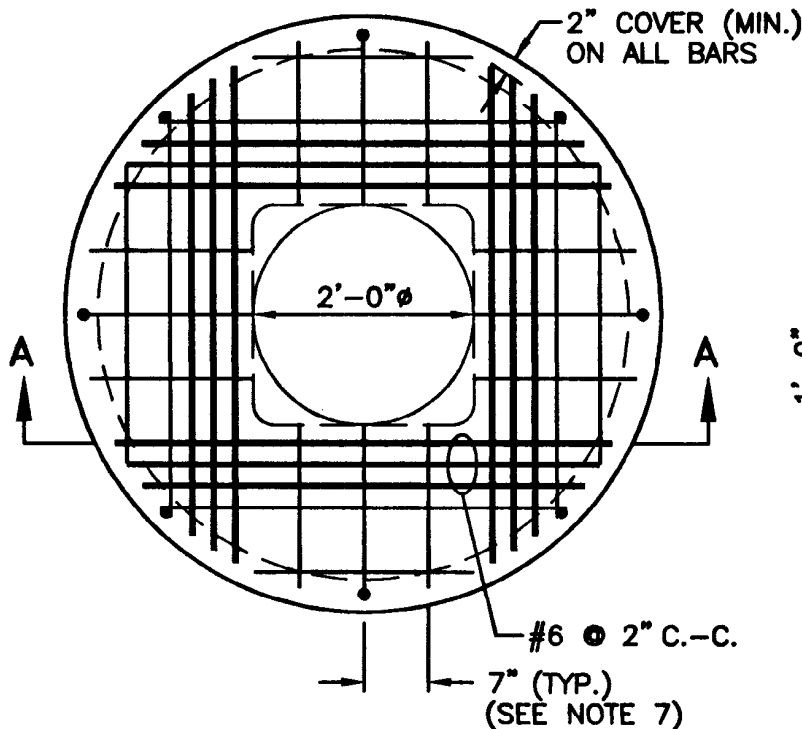
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE

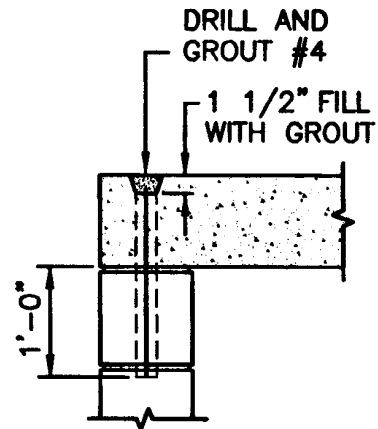
R.I.  
STANDARD  
**4.5.2**



**SECTION A-A**



**PLAN**



**DOWEL DETAIL**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CONCRETE COVER FOR SHALLOW  
4'-0" ROUND MANHOLES**

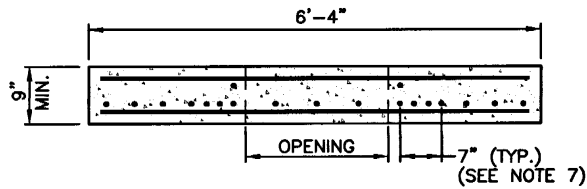
REVISIONS		
NO.	BY	DATE

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

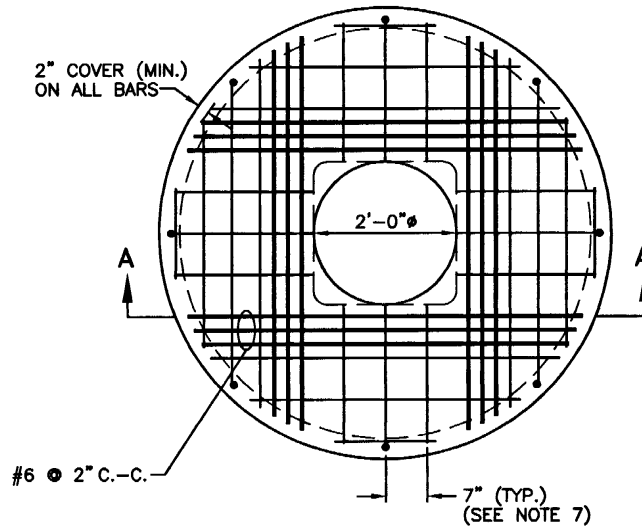
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

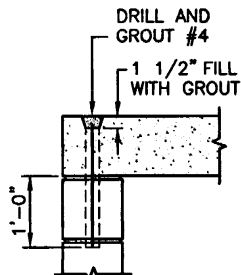




SECTION A-A



PLAN



DOWEL DETAIL

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.
7. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE REBARS SHALL BE #6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #6 BARS PLACED ADJACENT TO THE OPENING, BOTH WAYS, WITH 2" MINIMUM COVER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

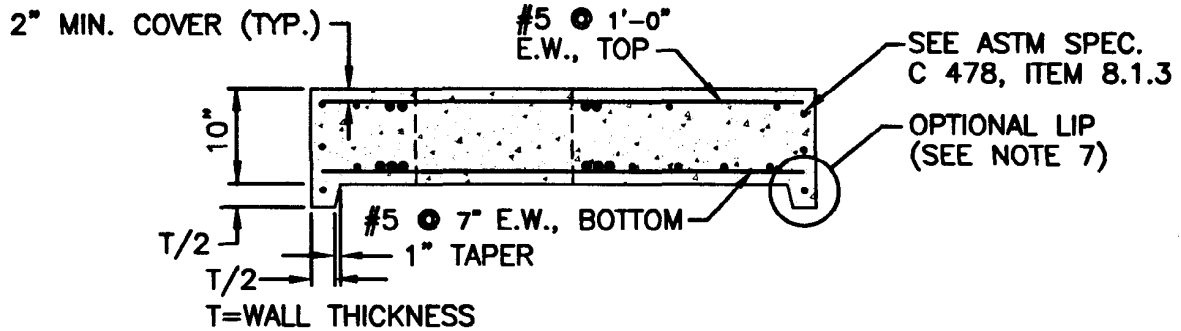
CONCRETE COVER FOR SHALLOW 5'-0" ROUND MANHOLES

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

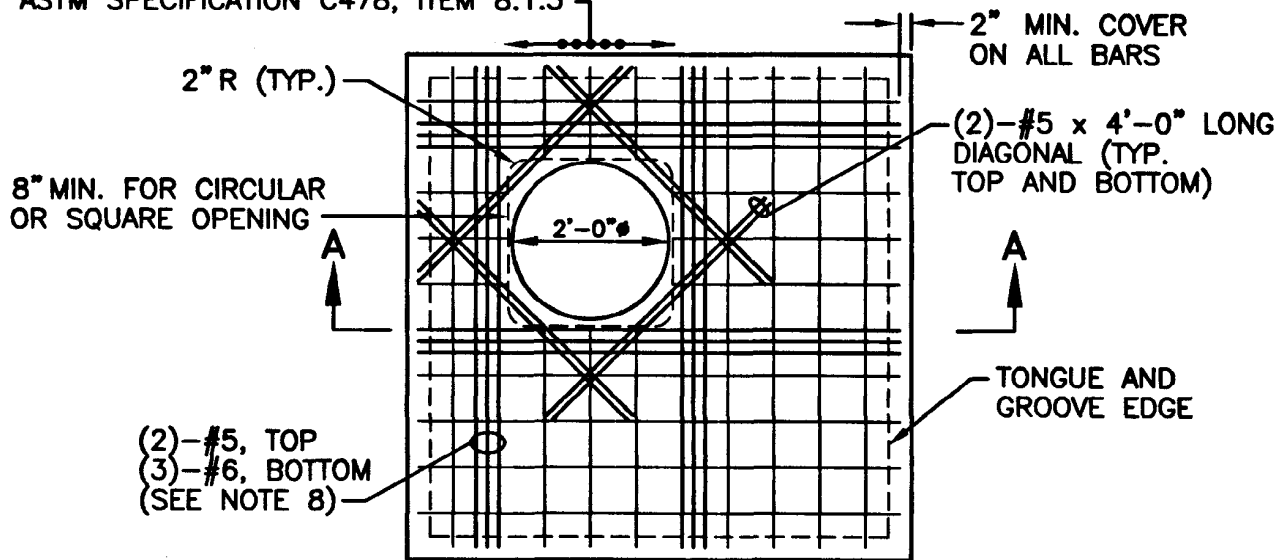
JUNE 15, 1998  
ISSUE DATE





### SECTION A-A

ASTM SPECIFICATION C478, ITEM 8.1.3



### PLAN

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS TOP COVER IS FOR STD. 4.3.0.
3. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
4. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
5. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
6. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
7. WHERE NO LIP IS PROVIDED, THE ASTM SPECIFICATION REFERENCE SHALL BE IGNORED. IN ALL CASES, THE CONTACT SURFACES SHALL MATCH.
8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 (SHOWN WITH HEAVIER LINE FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0" BOTH WAYS WITH 2" MINIMUM COVER, EXCEPT FOR BARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.
9. FOR DOUBLE GRATE OPENINGS, THE REBARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

### TOP COVER FOR 4'-0" OR 6'-0" SQUARE CATCH BASINS AND MANHOLES

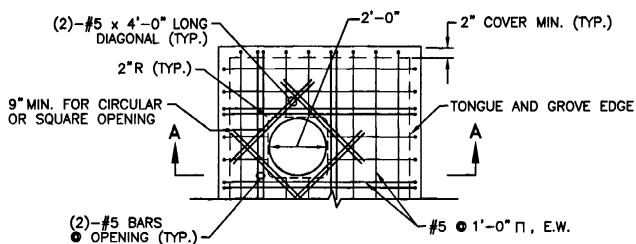
*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

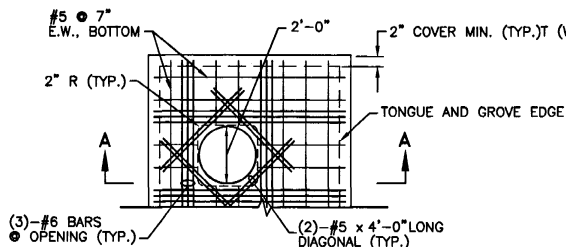
JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
4.7.0

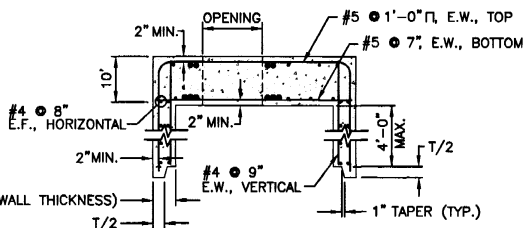




TOP MAT



BOTTOM MAT



SECTION A-A

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
4. TOP SLAB MONOLITHIC WITH RISER SECTION HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADING WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SECTION IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBARS ARE TO HAVE A 2" MINIMUM CLEARANCE FROM OPENING.
6. THE SPLICE LENGTHS ON TIES ARE TO BE A MINIMUM OF 1'-6".
7. WALL WIDTHS MUST BE EQUIVALENT TO THOSE OF THE BASE SECTION.
8. ALL REBARS IN THE BOTTOM MAT ARE #5 @ 7" BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3) #6 (SHOWN WITH HEAVIER LINES FOR CLARITY). REBARS IN THE TOP MAT ARE #5 @ 1'-0" BOTH WAYS, WITH A 2" MINIMUM COVER, EXCEPT FOR THE REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2) #5 BARS.
9. FOR DOUBLE GRATE OPENINGS, THE REINFORCING BARS SURROUNDING THE OPENING IN THE BOTTOM MAT SHALL BE #7 BARS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TOP COVER MONOLITHIC WITH RISER SECTION  
FOR 4'-0" OR 6'-0" SQUARE CATCH BASINS AND MANHOLES

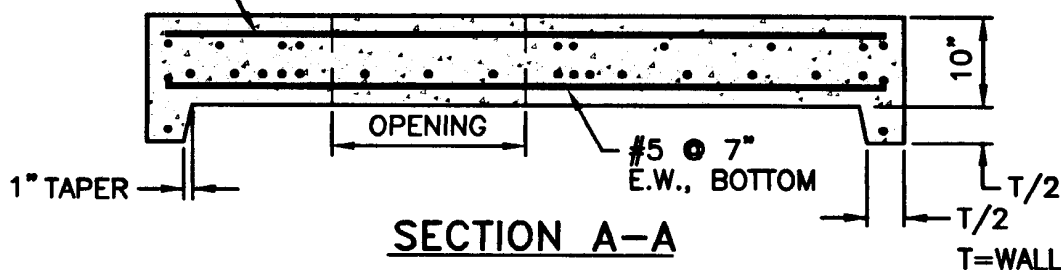
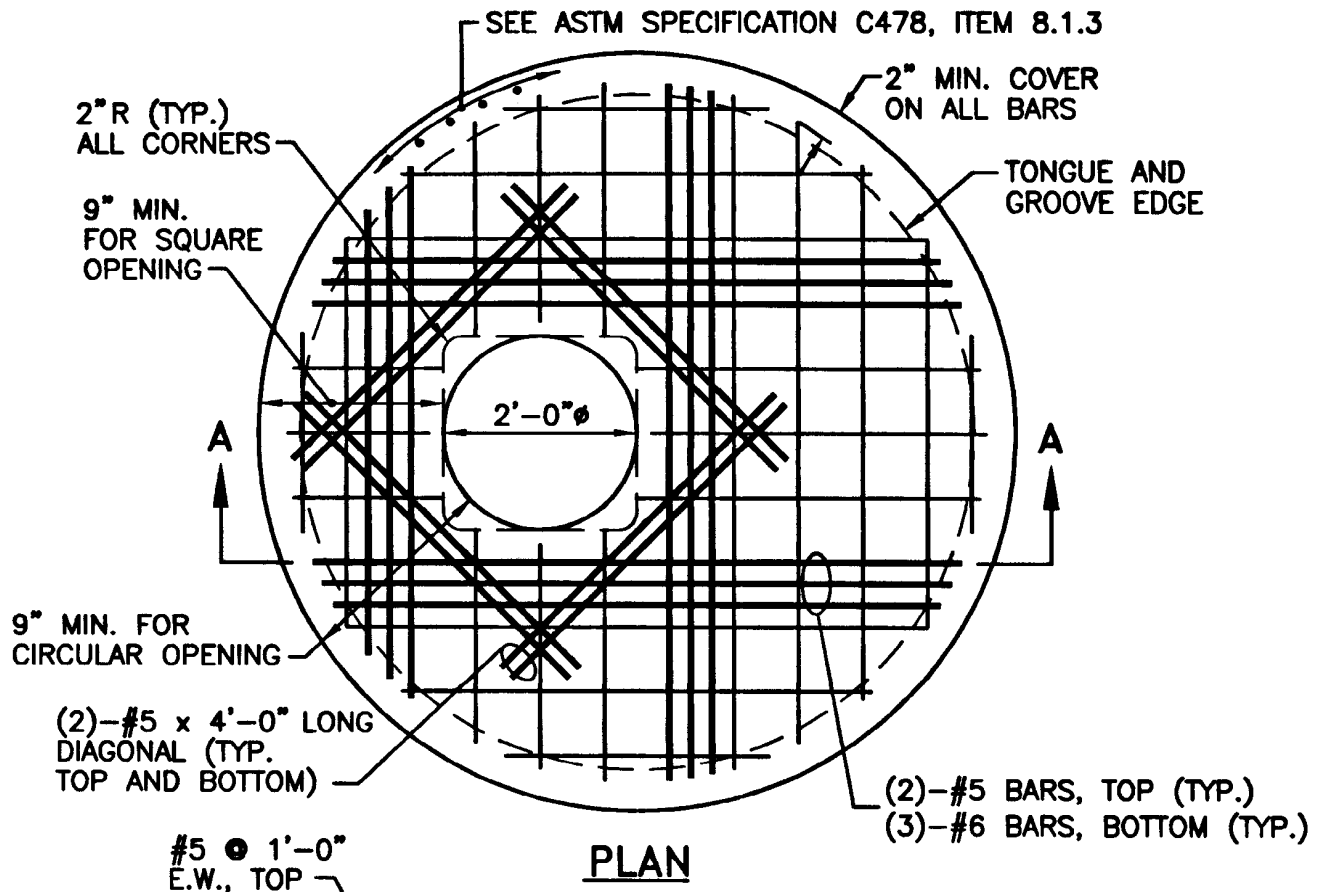
R.I.  
STANDARD  
4.7.1

JUNE 15, 1998  
DATE DATE

*[Signature]*  
DESIGNED BY  
TRANSPORTATION

*[Signature]*  
CHECKED BY  
TRANSPORTATION

REVISIONS	NO.	BY	DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
3. THE CENTER LINE OF THE OPENING MUST BE WITHIN 2" FROM THE STEPS.
4. ALTERNATE TOP COVER IS STEEL REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
5. ALL REBAR SHALL HAVE A MINIMUM OF 2" CLEARANCE FROM OPENING.
6. ALL REBARS IN THE BOTTOM MAT ARE #5  $\odot$  2", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (3)-#6 SHOWN WITH A HEAVIER LINE FOR CLARITY. REBARS IN THE TOP MAT ARE #5  $\odot$  1'-0", BOTH WAYS, WITH 2" MINIMUM COVER, EXCEPT FOR REBARS ADJACENT TO THE OPENING. THESE BARS SHALL BE (2)-#5 BARS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**ALTERNATE TOP COVER FOR ROUND PRECAST MANHOLES AND CATCH BASINS**

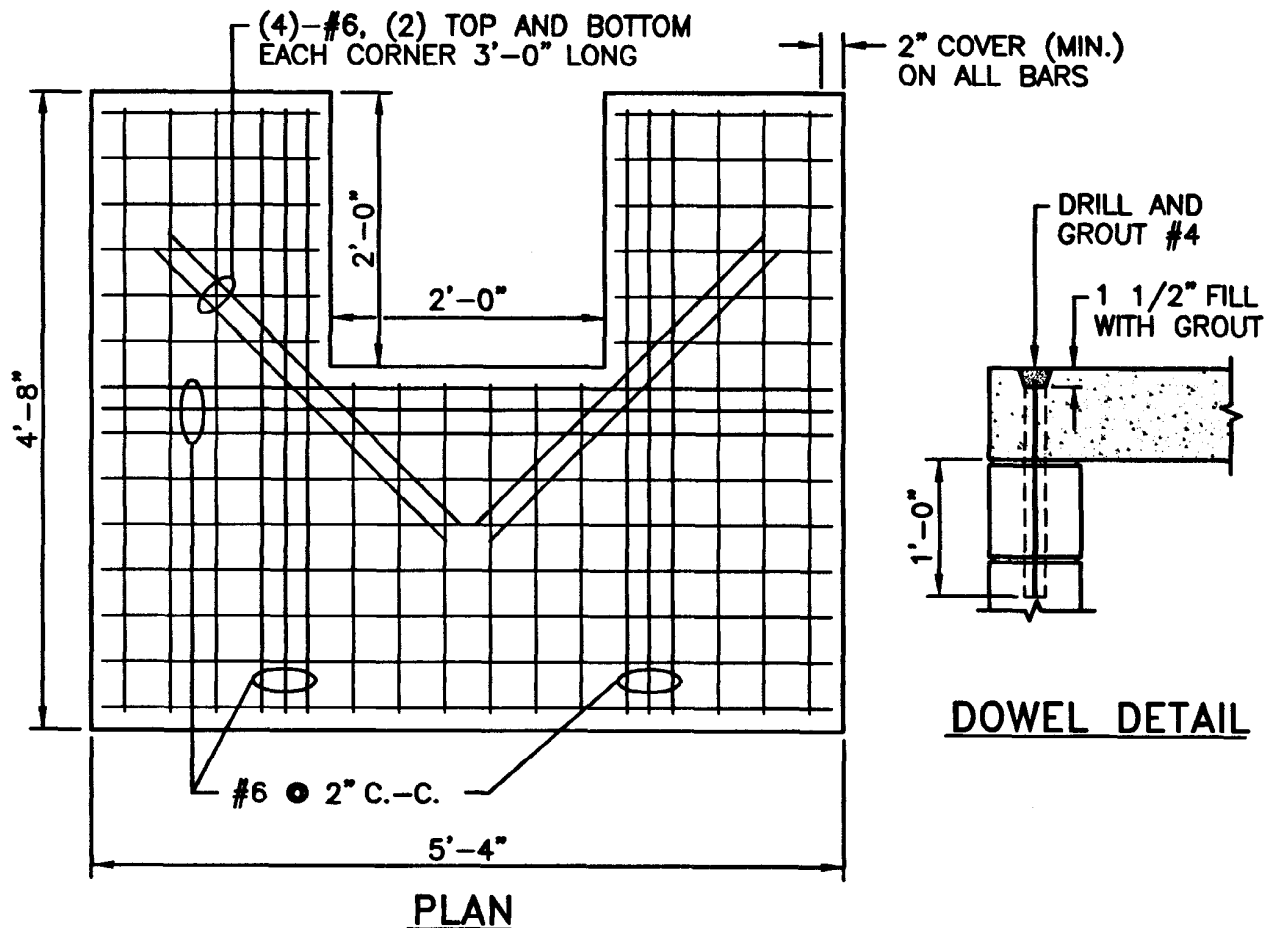
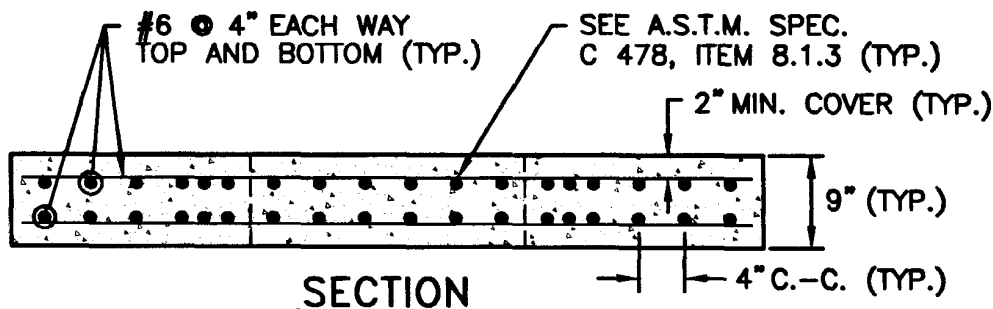
REVISIONS		
NO.	BY	DATE

*John A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
4.7.2



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

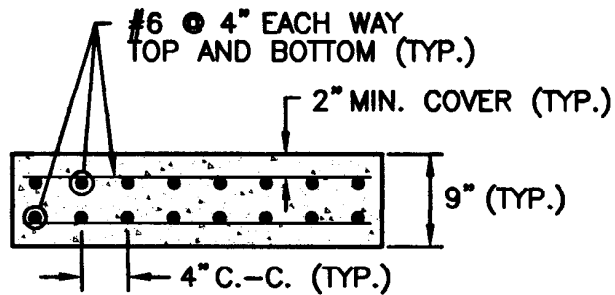
**CONCRETE COVER FOR SHALLOW  
TYPE "F" SQUARE CATCH BASINS**

*James H. Gault*  
CHIEF ENGINEER  
TRANSPORTATION

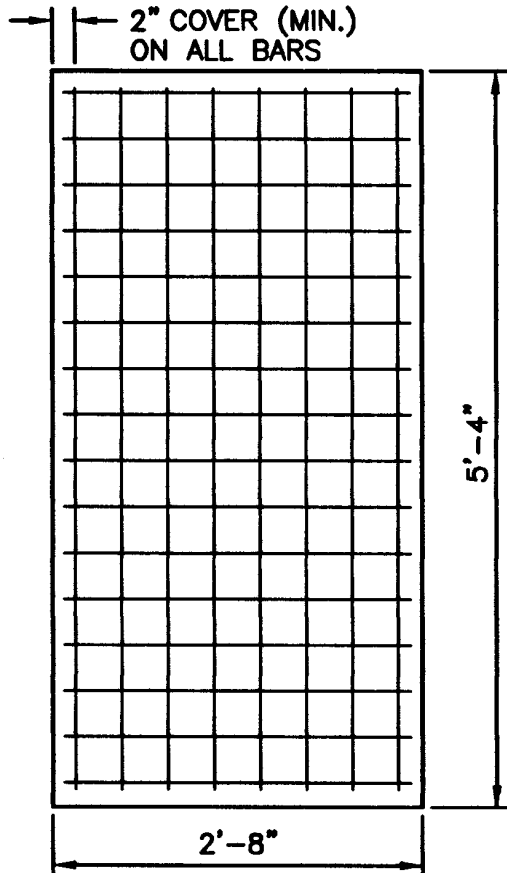
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

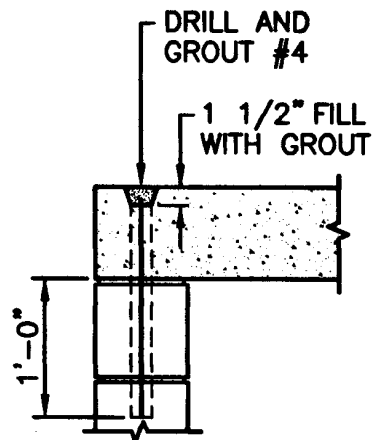




**SECTION**



**PLAN**





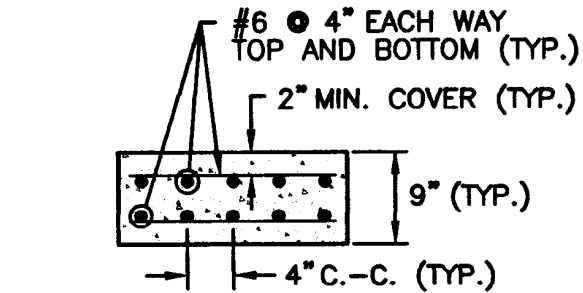
**DOWEL DETAIL**

**NOTES:**

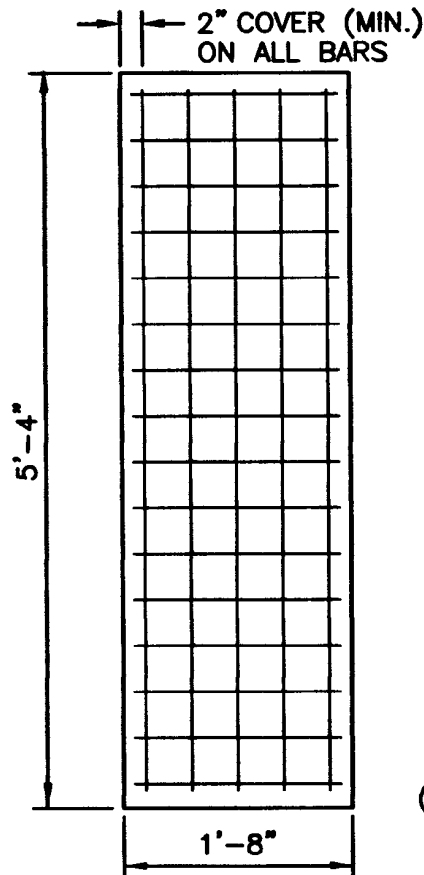
1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

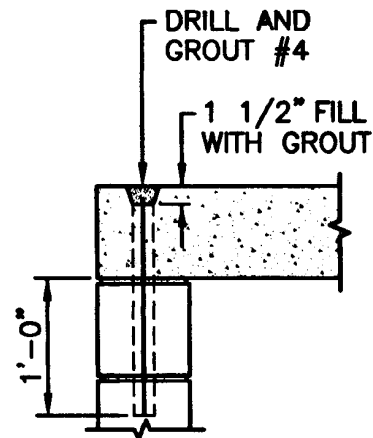
REVISIONS			CONCRETE COVER FOR SHALLOW DOUBLE GRATE CATCH BASINS WITH CURB	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 4.8.1 </div>
NO.	BY	DATE		
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">   CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998  ISSUE DATE </div> </div>	



**SECTION**



**PLAN**



**DOWEL DETAIL**

(TWO REQUIRED FOR EACH CATCH BASIN)

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

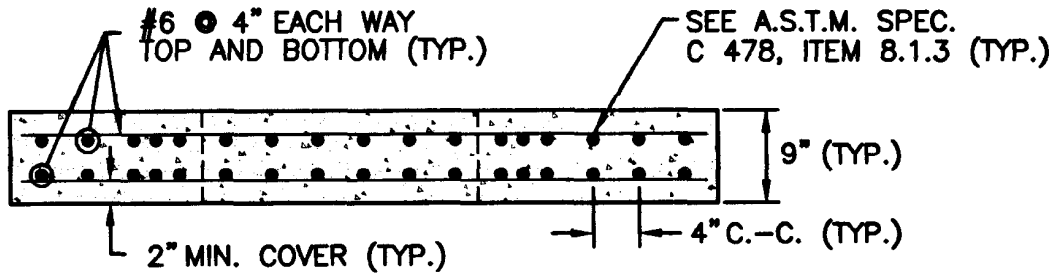
**CONCRETE COVER FOR SHALLOW DOUBLE  
GRATE CATCH BASINS WITHOUT CURB**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

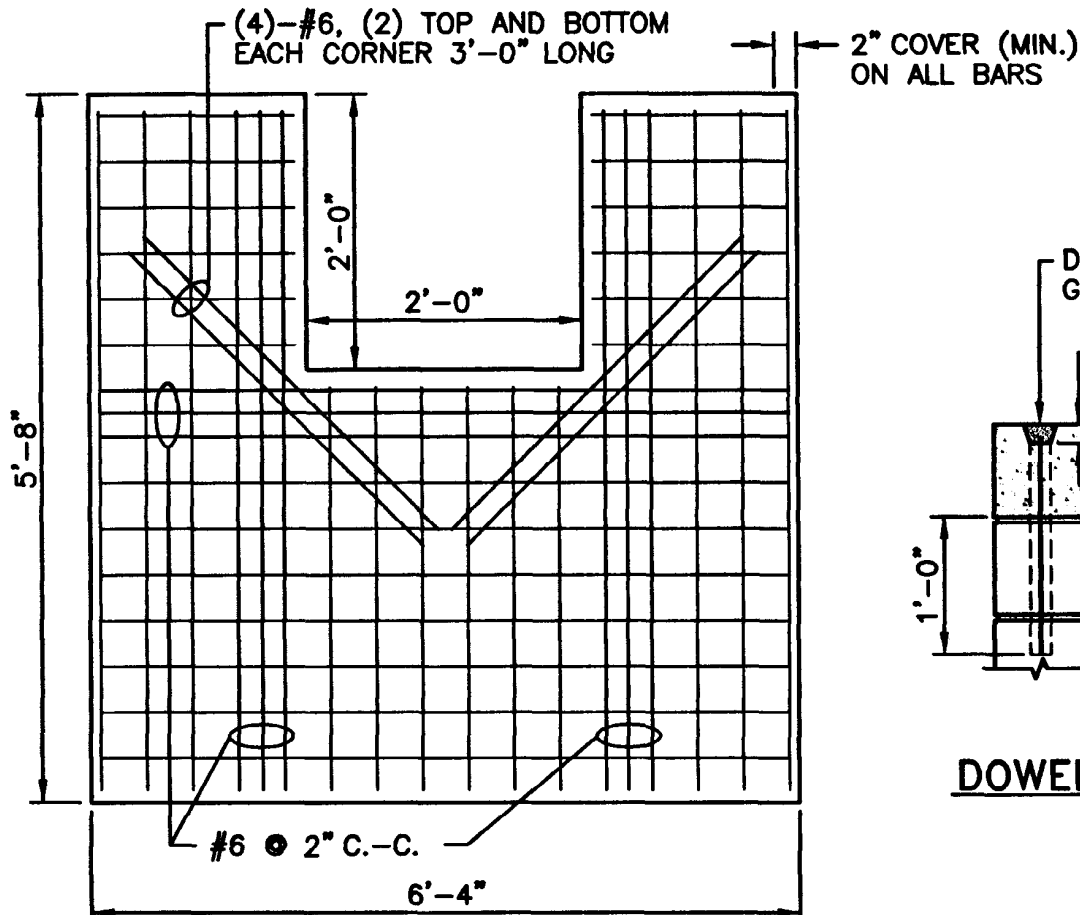
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

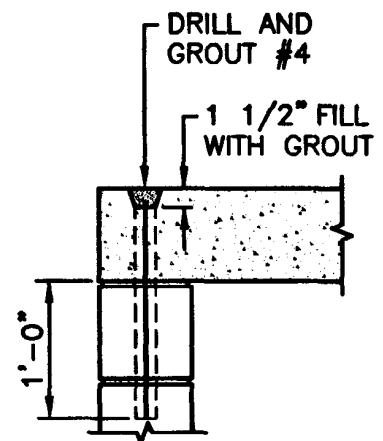




### SECTION



### PLAN



### DOWEL DETAIL

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS NO GREATER THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### CONCRETE COVER FOR SHALLOW 5'-0" SQUARE CATCH BASINS

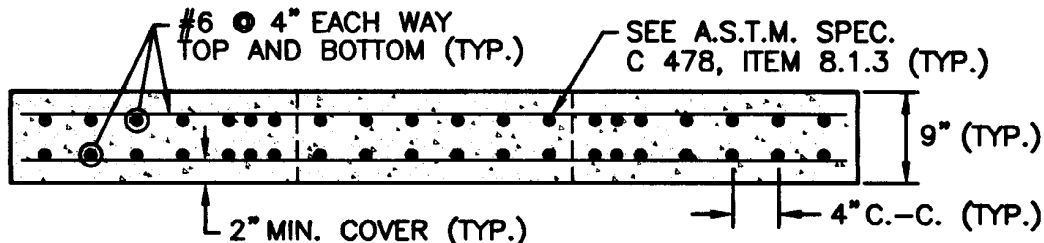
REVISIONS		
NO.	BY	DATE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

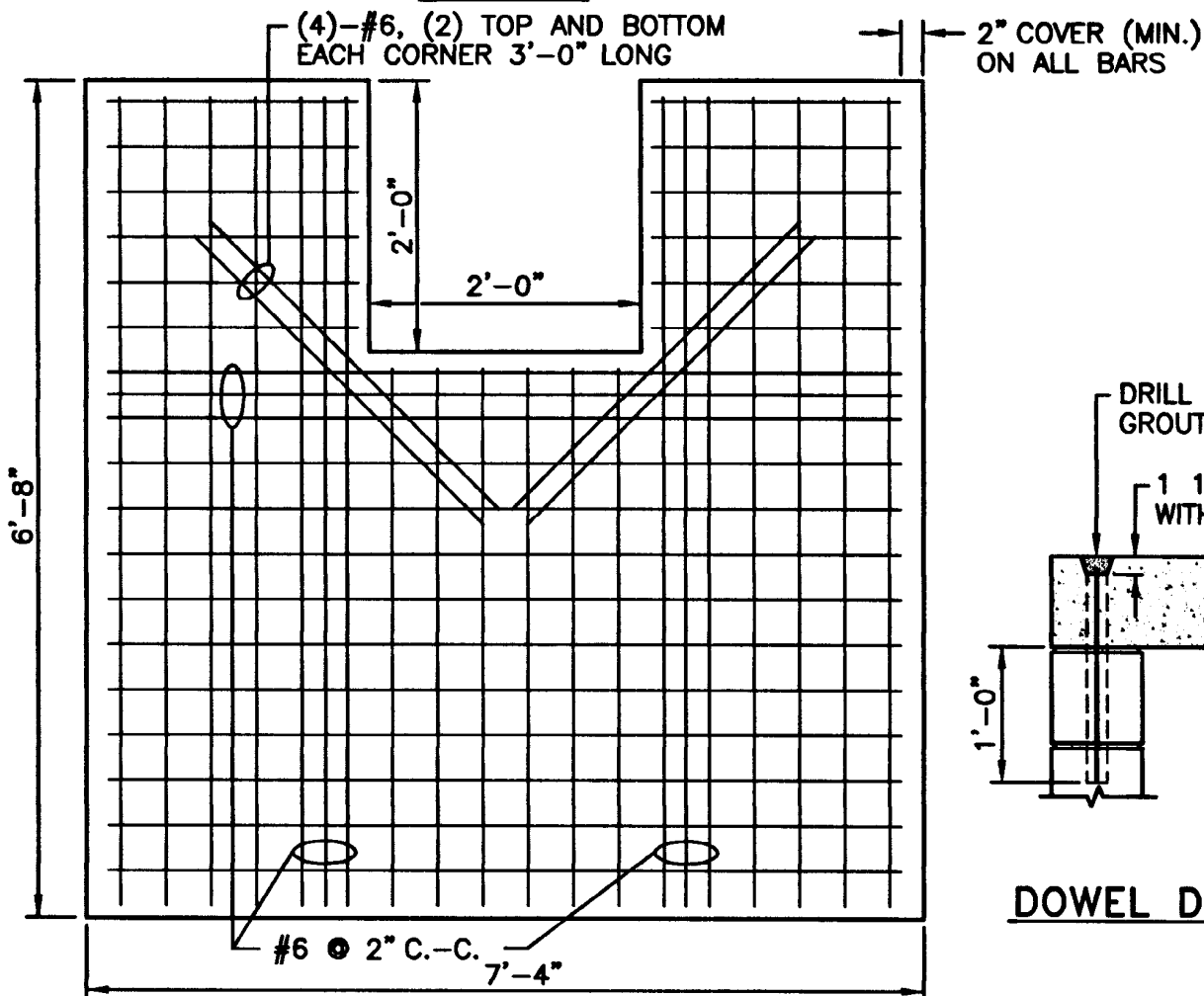
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
4.8.3



### SECTION



### PLAN

### DOWEL DETAIL

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
3. TOP SLAB HAS BEEN REINFORCED TO MEET OR EXCEED H-25 OR HS-25 LOADINGS WITH EARTH PRESSURES INCLUDED. THIS IMPLIES THAT THE TOP SLAB IS DESIGNED FOR AXLE LOADS OF NO MORE THAN 20 TONS.
4. ALL REBARS ARE TO HAVE A MINIMUM 2" CLEARANCE FROM OPENING.
5. PRECAST SECTION SHALL BE LIFTED USING APPROVED LIFTING LUGS LOCATED SUCH THAT NO DAMAGE TO THE SLAB OCCURS.
6. DOWEL HOLES IN COVER TO BE FORMED OR CORED BY THE FABRICATOR.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### CONCRETE COVER FOR SHALLOW 6'-0" SQUARE CATCH BASINS

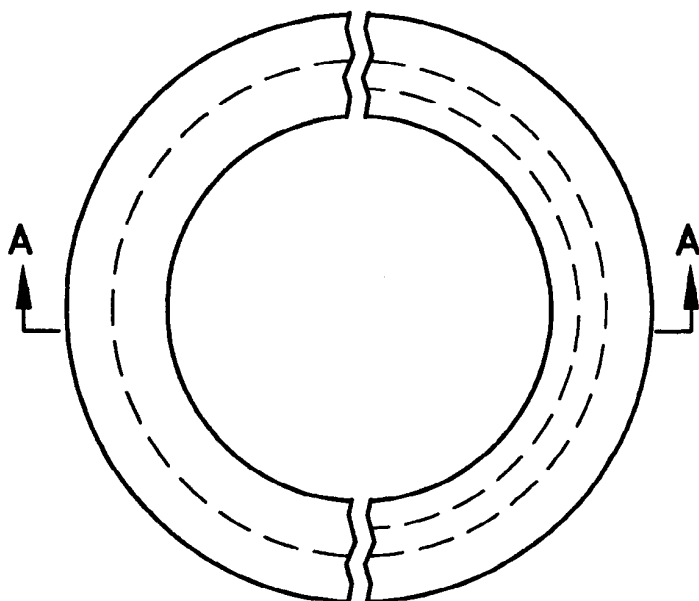
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

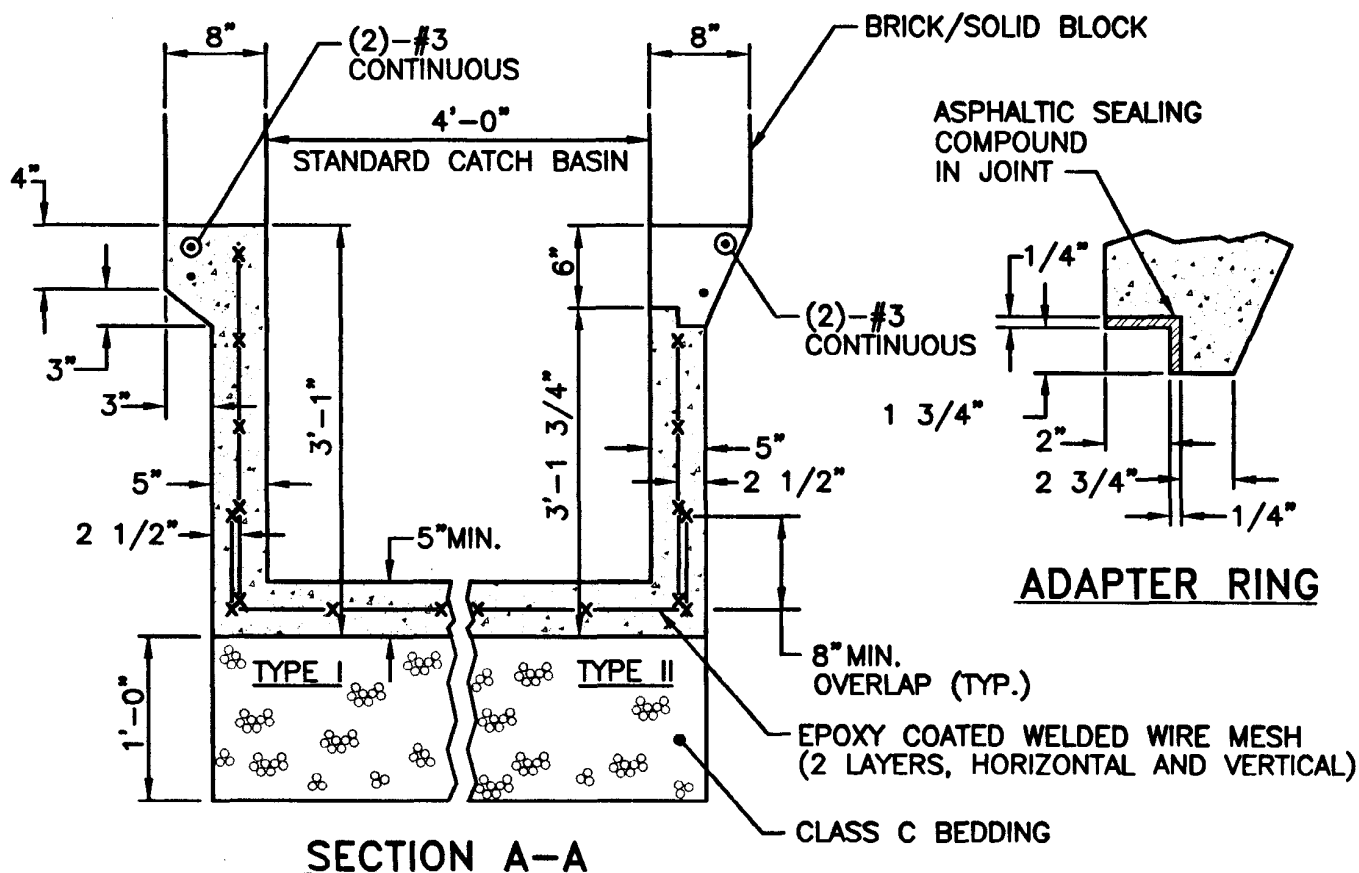




**PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. EITHER TYPE I OR TYPE II MAY BE USED AT THE DISCRETION OF THE ENGINEER.
3. REINFORCING TO BE 4x4-W4.0 xW4.0 WELDED WIRE MESH, 2 LAYERS, HORIZONTAL AND VERTICAL (EPOXY COATED).



**SECTION A-A**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**PRECAST CONCRETE SUMP FOR  
ROUND CATCH BASINS (WET AREAS)**

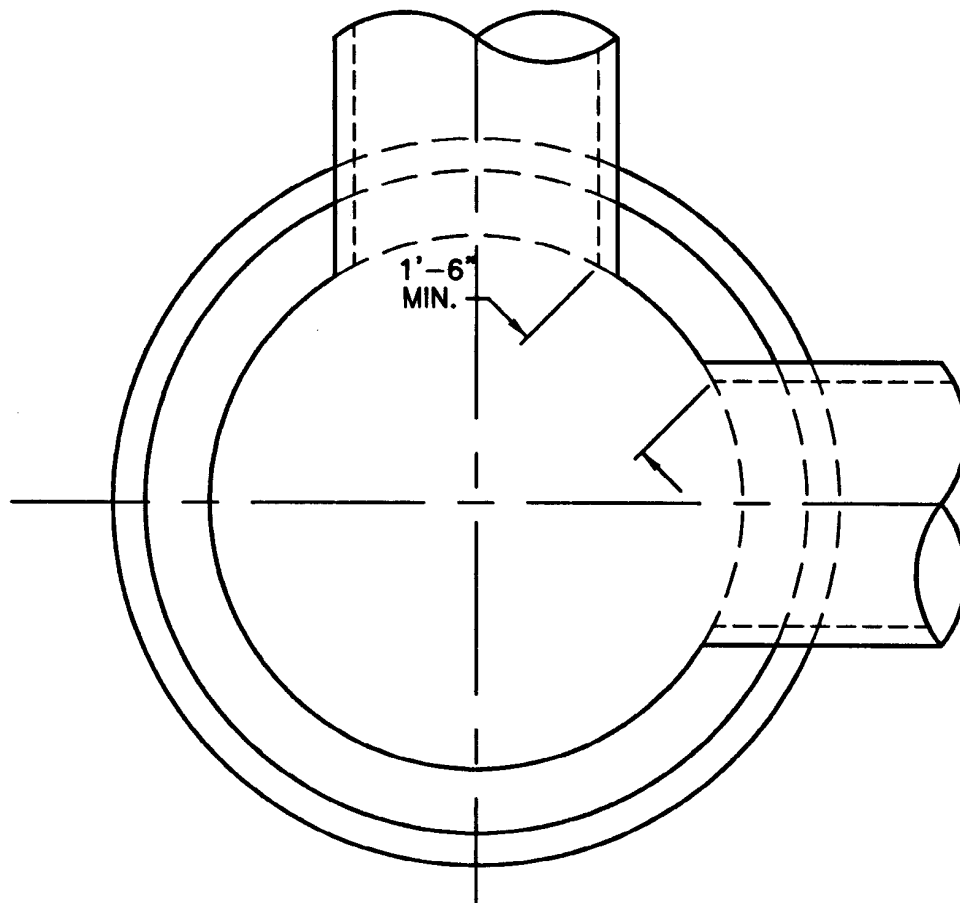
*John A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE







**CROSS SECTION OF MANHOLE OR CATCH BASIN**

	4 FT. MANHOLE OR CATCH BASIN	5 FT. MANHOLE OR CATCH BASIN	6 FT. MANHOLE OR CATCH BASIN
MAX. PIPE O.D. STRAIGHT THRU TO 45° DEFLECTION	33 1/2" O.D. 27" R.C. PIPE	44" O.D. 36" R.C. PIPE	51" O.D. 42" R.C. PIPE
MAX. PIPE O.D. 90° DEFLECTION	23" O.D. 18" R.C. PIPE	33 1/2" O.D. 27" R.C. PIPE	37" O.D. 30" R.C. PIPE

**NOTE:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE MINIMUM DISTANCE BETWEEN PIPES ENTERING MANHOLES AND CATCH BASINS MUST BE 1'-6". THE SIZE OF THE CATCH BASIN WILL BE DETERMINED BY THE PIPE SIZE AND ENTRY ANGLE. (SEE TABLE ABOVE.)

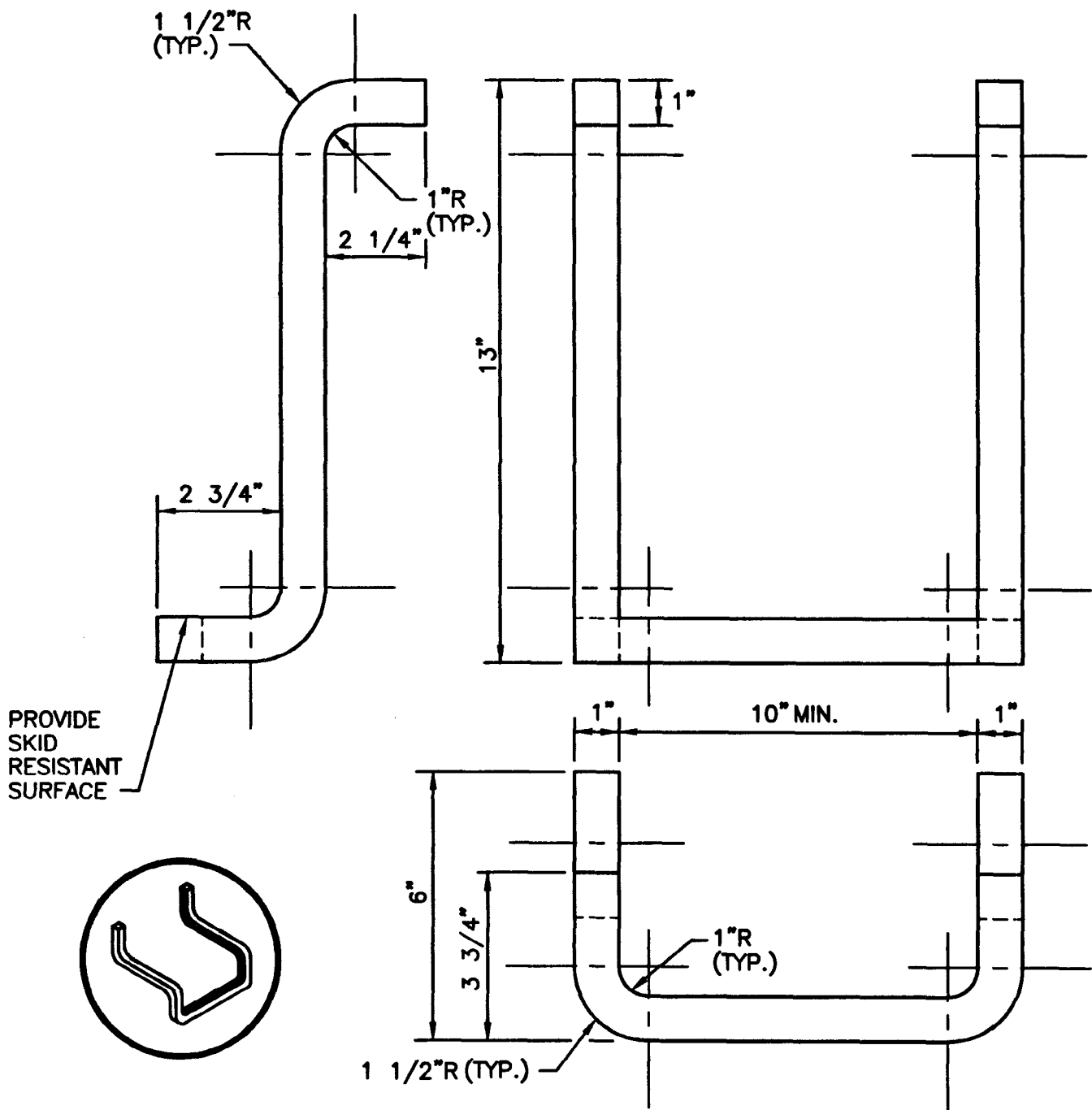
**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			<b>ROUND MANHOLES AND CATCH BASINS</b> <b>MAXIMUM PIPE SIZE STANDARD</b>	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>5.2.0</b> </div>
NO.	BY	DATE		

CHIEF ENGINEER  
TRANSPORTATION

CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE



**NOTES:**

1. STEPS SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. CROSS SECTION AREA MAY BE REDUCED UPON SUBMISSION OF CERTIFIED LOAD TESTS. STEPS MUST SUPPORT 300 LBS.
3. STOCK SHOWN IS 1" SQUARE WHICH MAY BE REPLACED BY 1" DIAMETER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

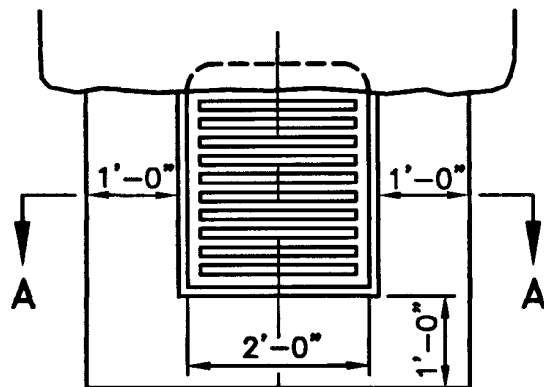
**CATCH BASIN AND MANHOLE STEP**

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

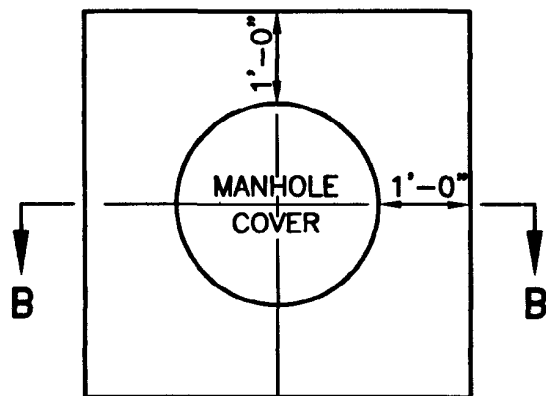
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

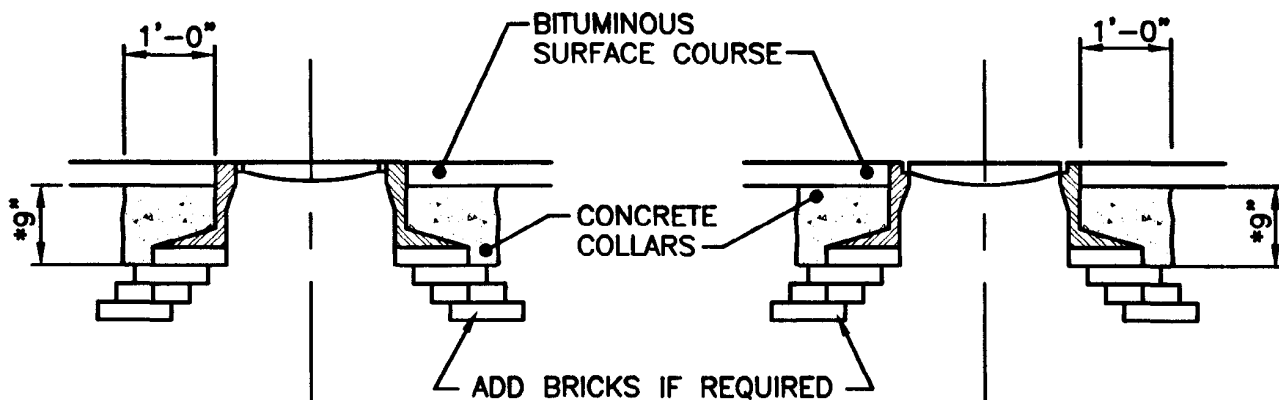




PLAN



PLAN



SECTION A-A  
CATCH BASINS

SECTION B-B  
MANHOLE COVERS

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
2. COLLARS TO BE CONCRETE MASONRY AS DIRECTED.
- \*3. 9" OF CONCRETE IN BITUMINOUS PAVED AREAS. MEET EXISTING CONCRETE IN PORTLAND CEMENT CONCRETE AREAS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

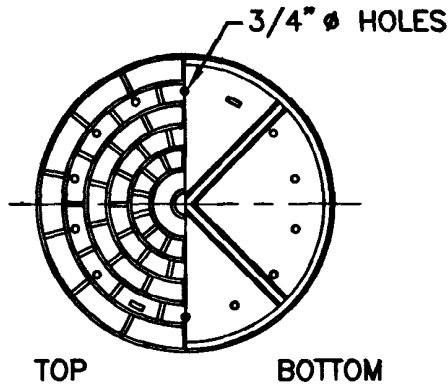
**CONCRETE COLLARS**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

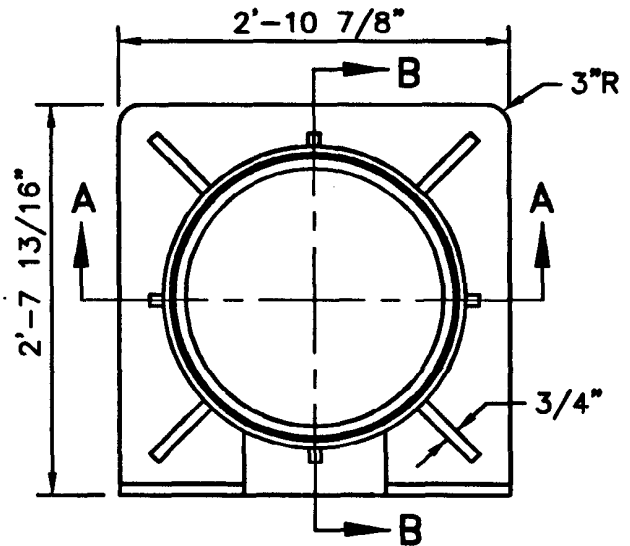
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

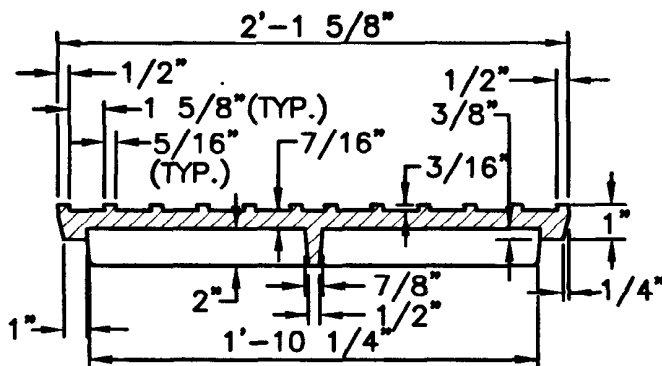




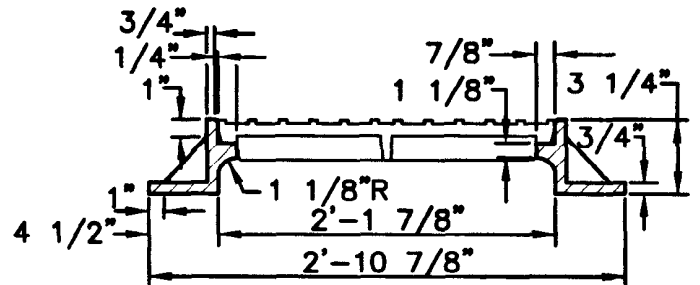
COVER



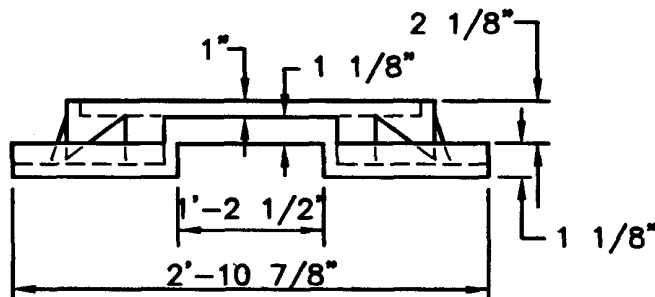
FRAME



FRONT ELEVATION



SECTION A-A



SECTION B-B

NOTES:

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

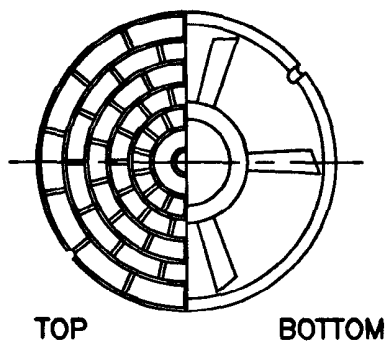
LIGHT-DUTY  
SQUARE FRAME AND ROUND COVER

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

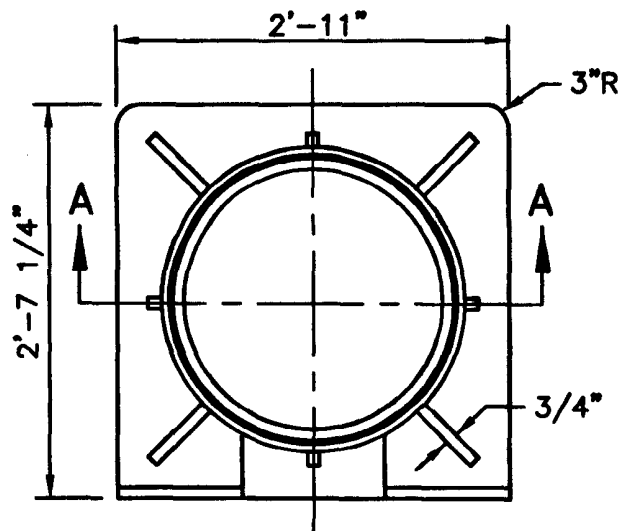
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

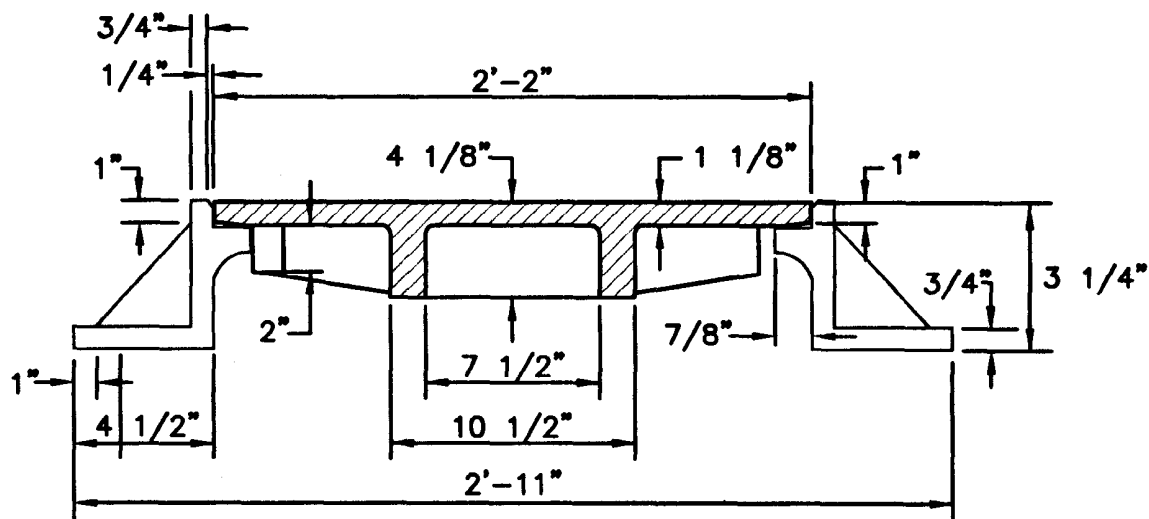




COVER



FRAME



SECTION A-A

**NOTES:**

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS TO BE MACHINE FINISH.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			HEAVY-DUTY SQUARE FRAME AND ROUND COVER		<div><div>R.I. STANDARD 6.1.1</div></div>
NO.	BY	DATE			
			<div><div><div>James A. Capaldi</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>		



FRAME

[illegible]

**NOTE:**

**NOTE:**  
**FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.**

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

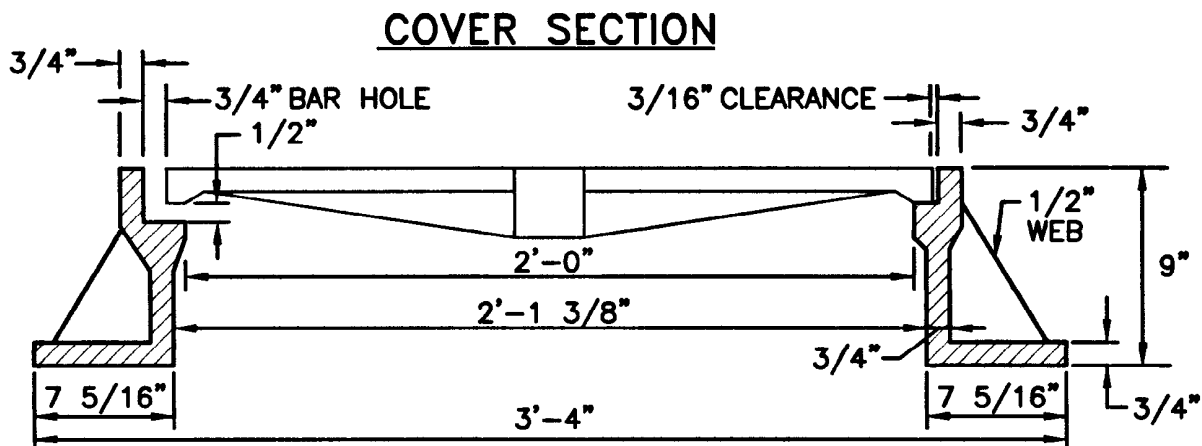
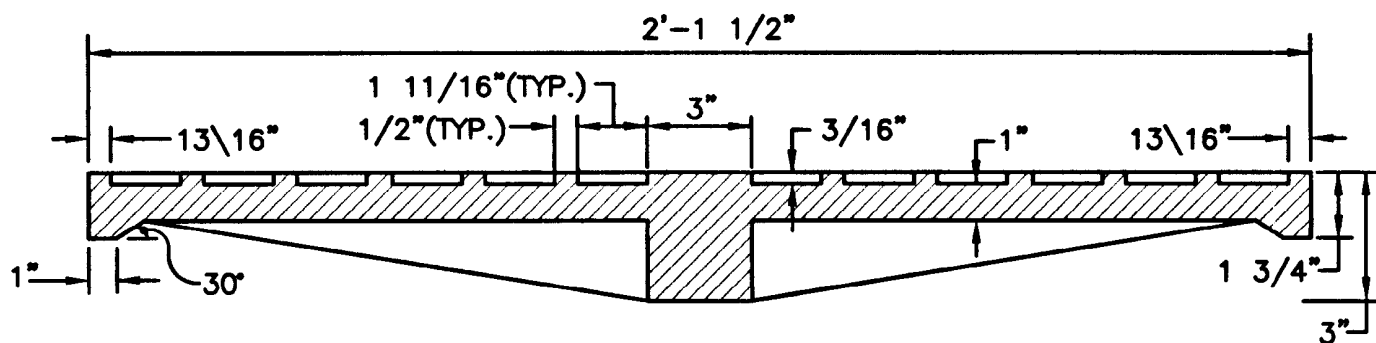
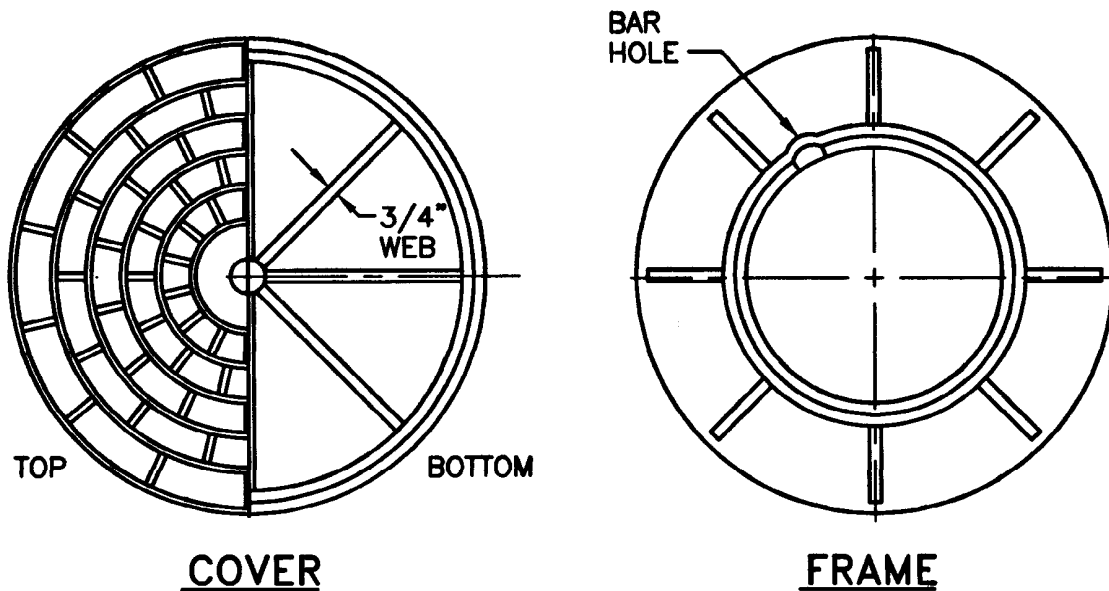
## ROUND FRAME AND COVER LIGHT-DUTY

*James H. Gault*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE

**R.I.  
STANDARD  
6.2.0**



**NOTES:**

1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

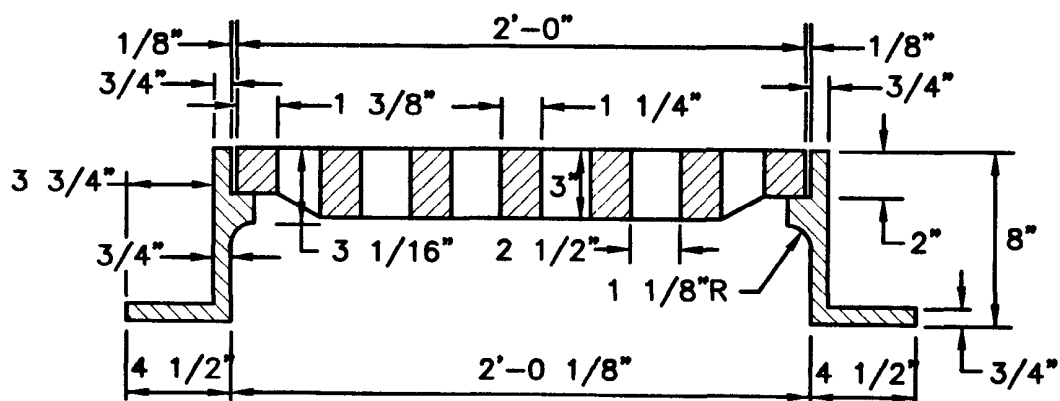
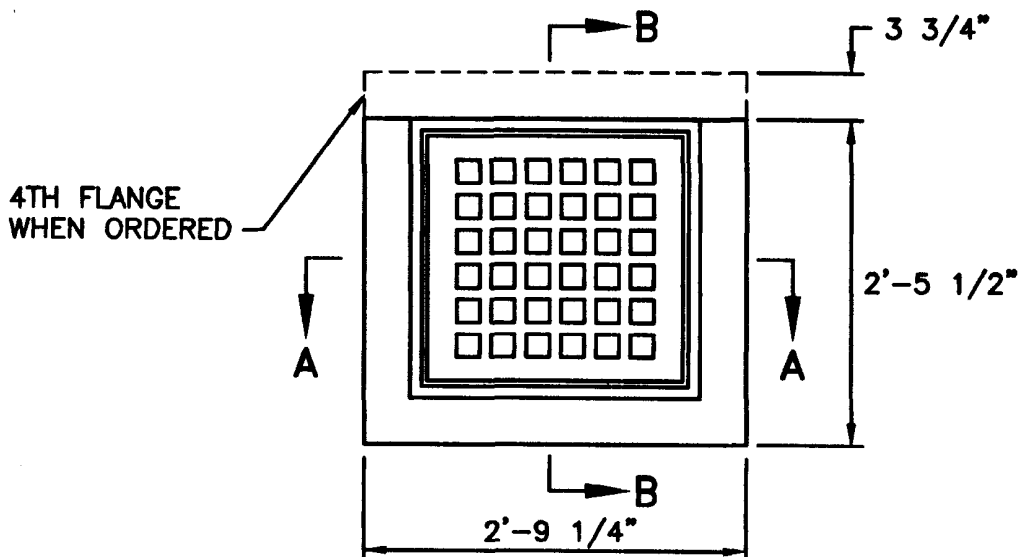
**HEAVY-DUTY  
ROUND FRAME AND COVER**

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

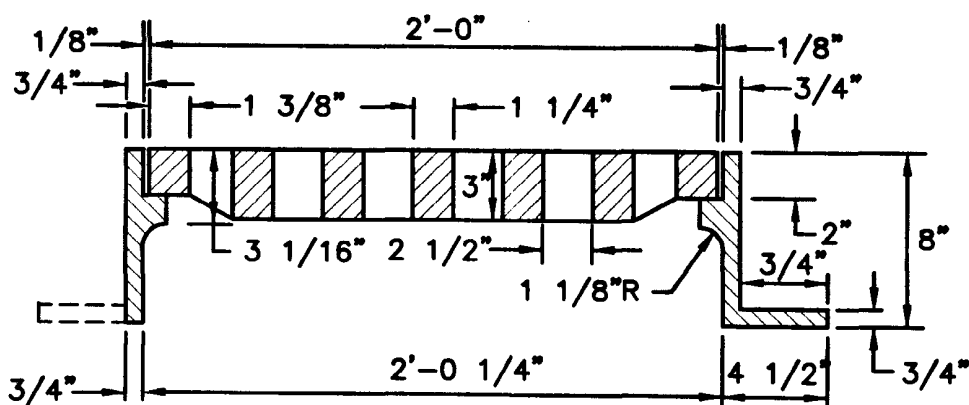
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





**SECTION A-A**



**SECTION B-B**

**NOTE:**

FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SQUARE FRAME AND GRATE**

REVISIONS		
NO.	BY	DATE

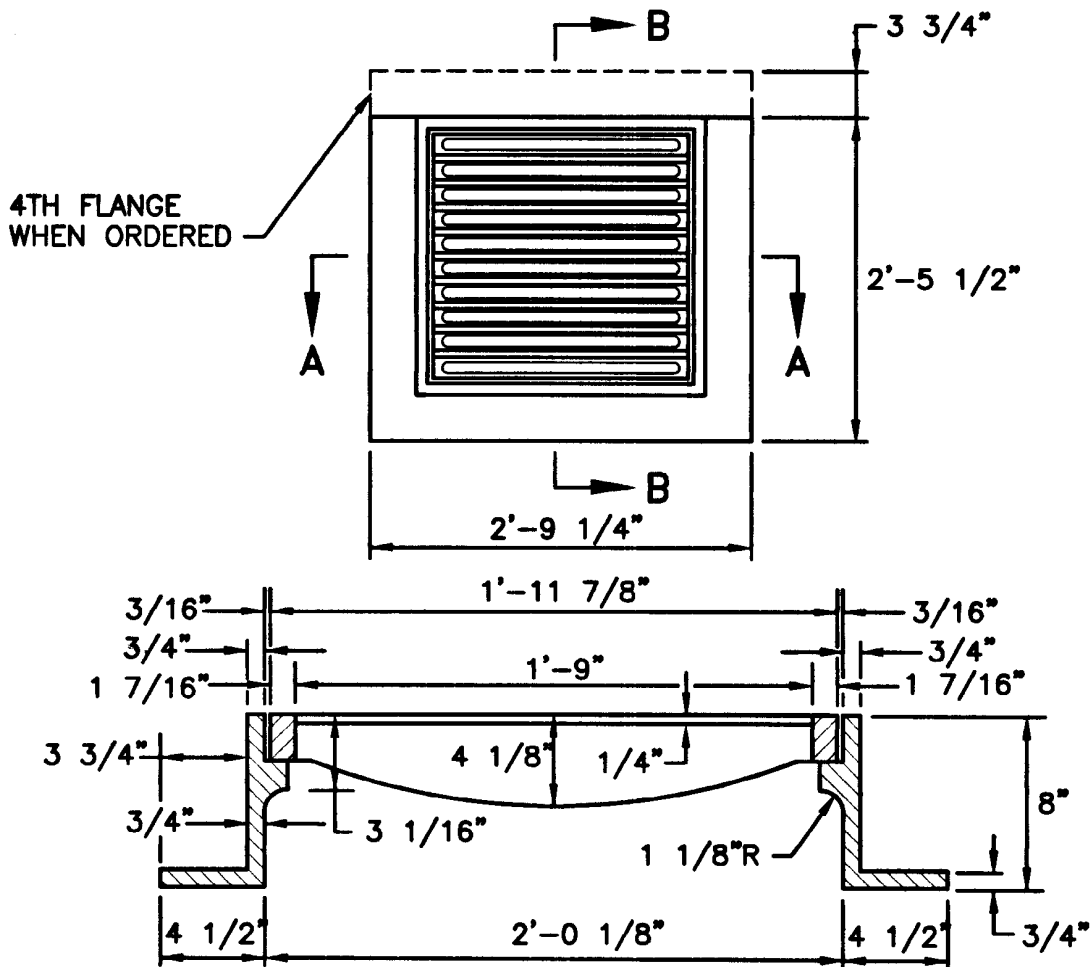
*James A. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

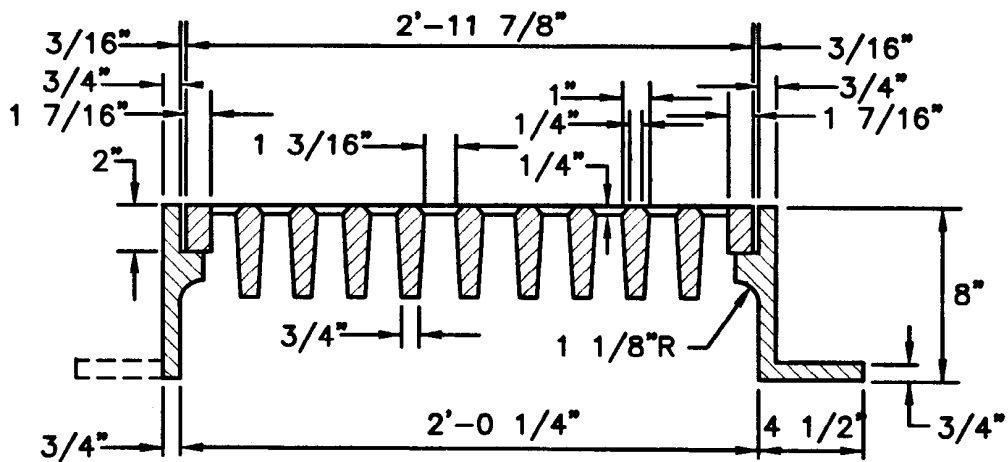
JUNE 15, 1998  
ISSUE DATE







**SECTION A-A**



**SECTION B-B**

**NOTE:**

FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SQUARE FRAME AND GRATE**

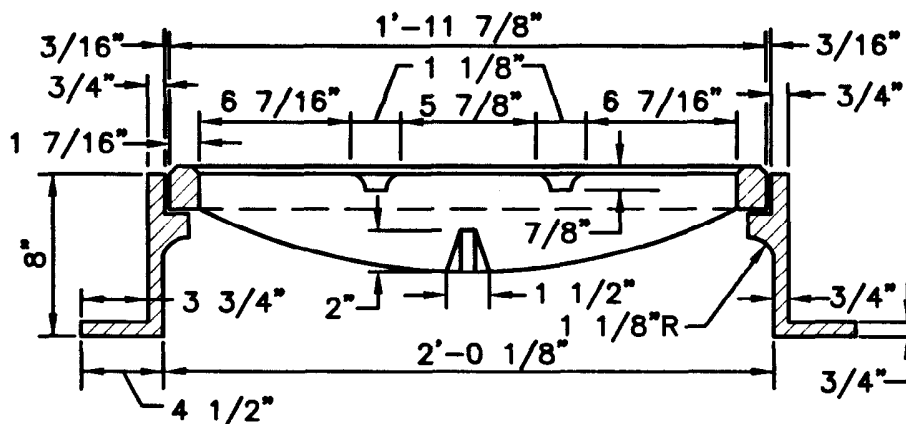
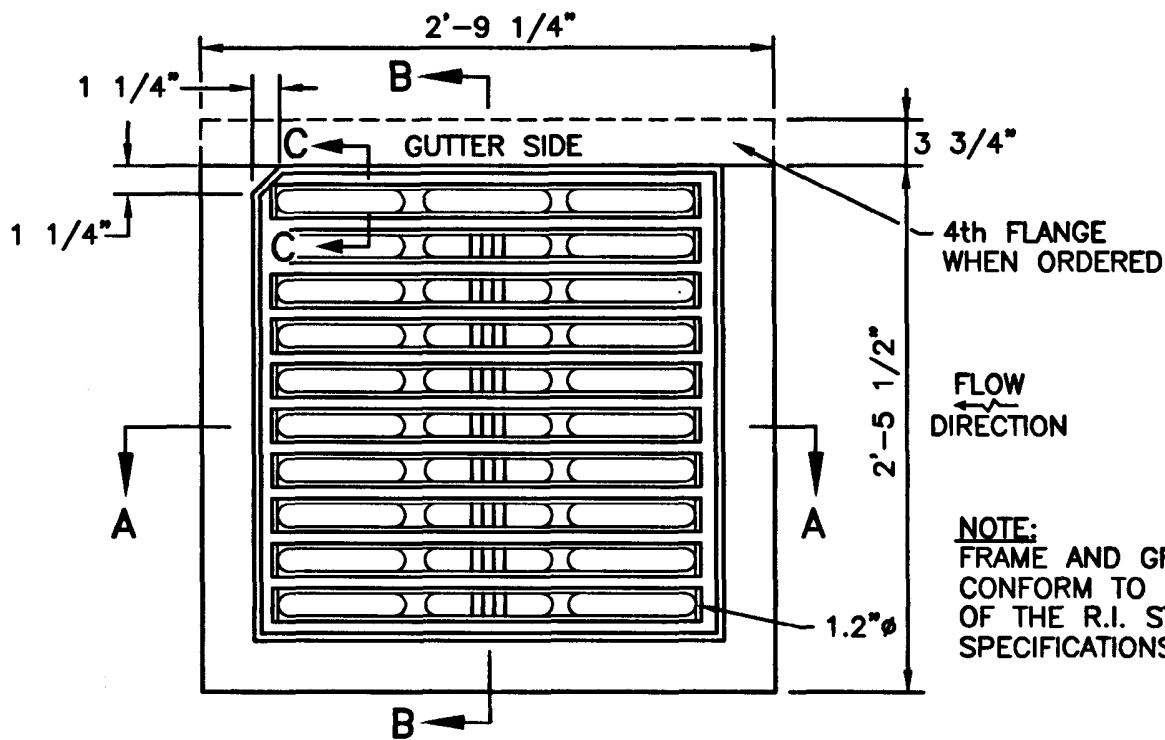
REVISIONS		
NO.	BY	DATE

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

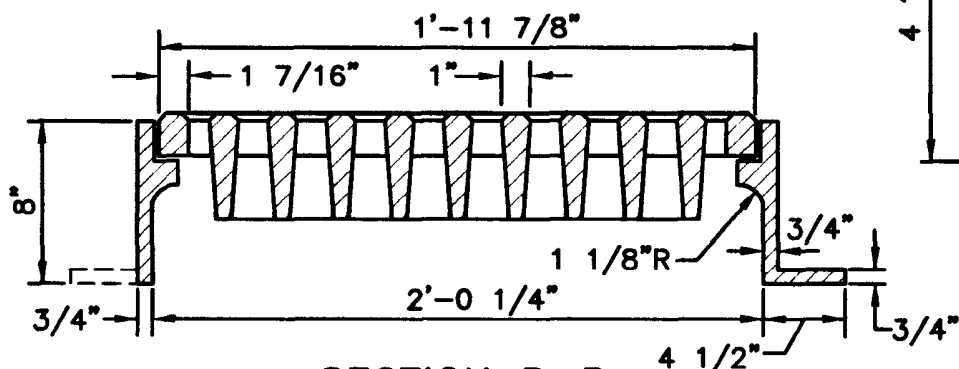
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

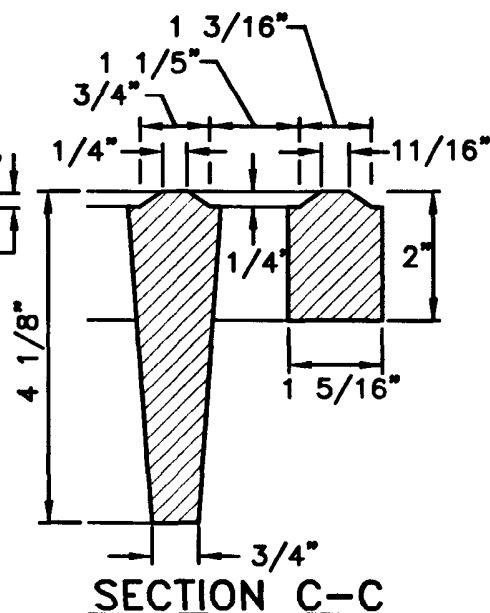
R.I.  
STANDARD  
**6.3.1**



SECTION A-A



SECTION B-B



SECTION C-C

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SQUARE FRAME AND GRATE  
(BICYCLE SAFE)

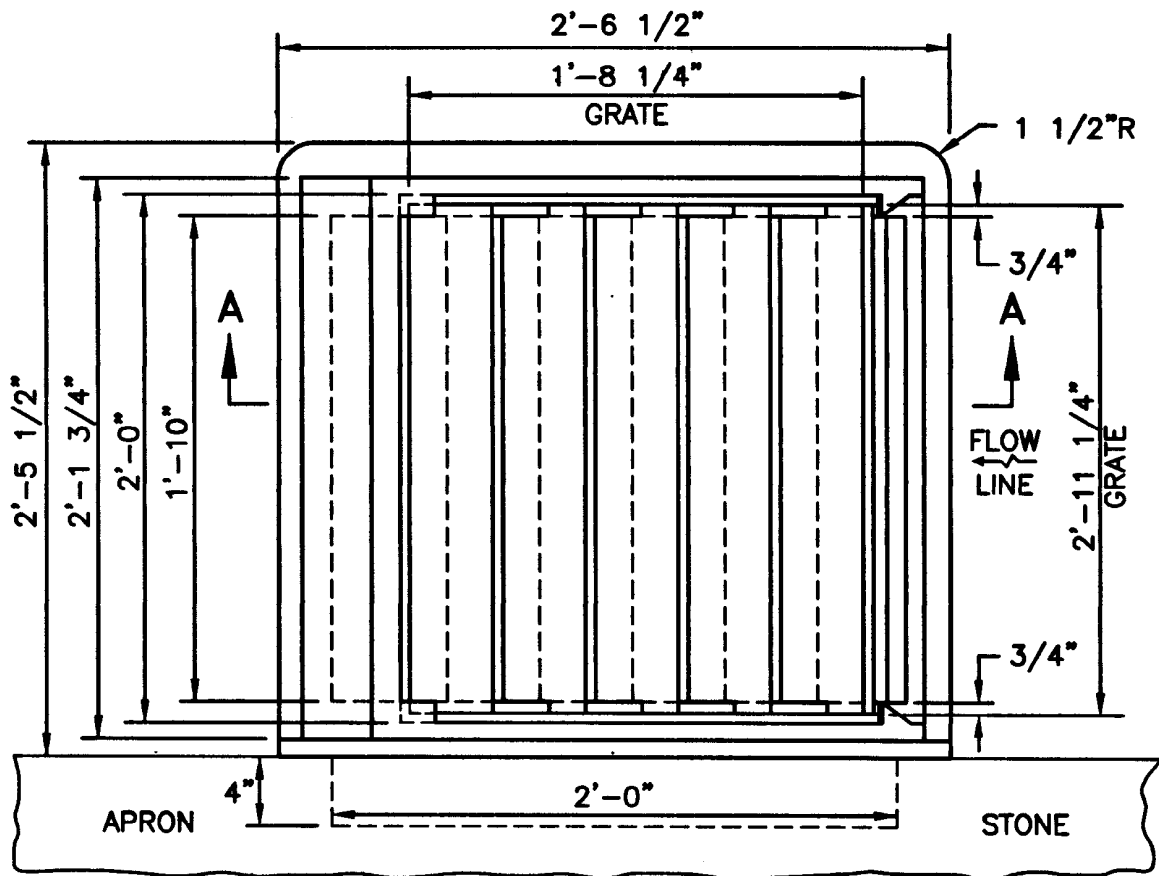
REVISIONS		
NO.	BY	DATE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

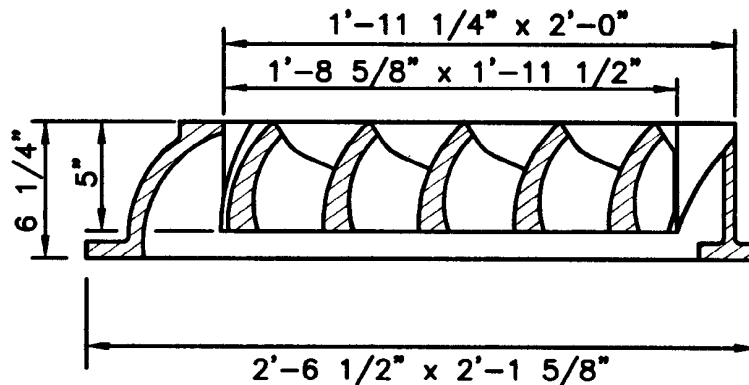
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**PLAN**



**SECTION A-A**

**NOTES:**

1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. GRATES CAN BE INSTALLED IN ONLY ONE POSITION IN THE FRAME. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING FRAME FOR PROPER ORIENTATION OF GRATE.
3. ORDER 2 FLANGE FRAME WHEN USED WITH CURBING OR APRON STONE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**HIGH CAPACITY FRAME AND GRATE**

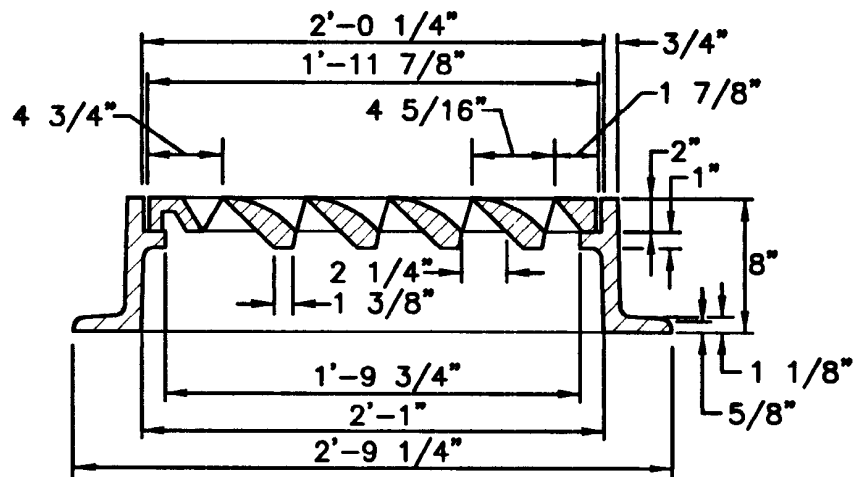
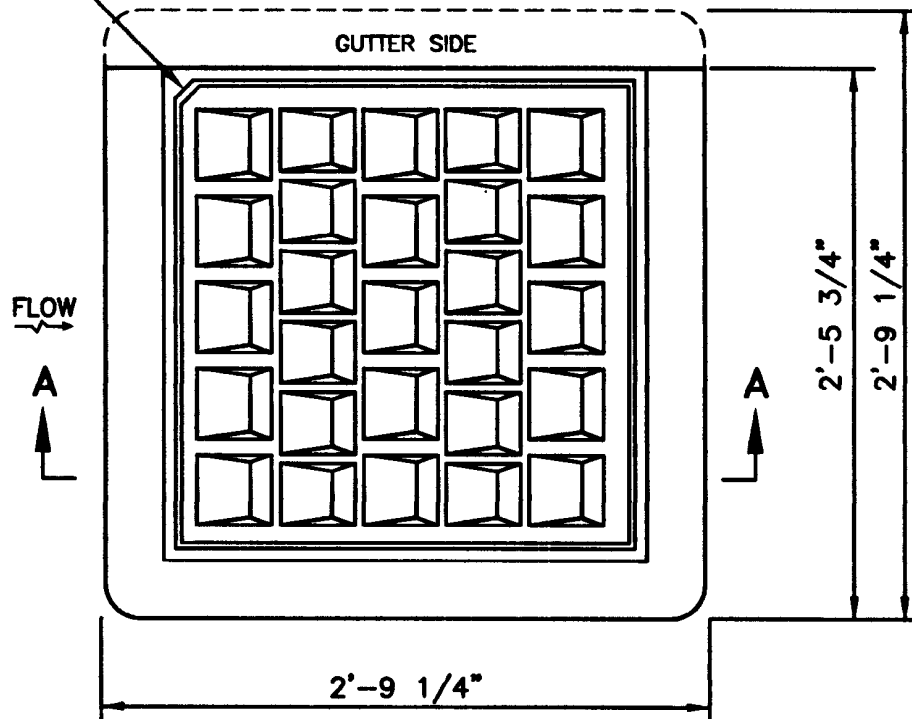
*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



(SEE NOTE 2)



### SECTION A-A

#### NOTES:

1. FRAME AND COVER SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS CORNER LEFT FOR "LEFT" GRATE, DIAGONALLY OPPOSITE CORNER FOR "RIGHT" GRATE TO FIT IN KEYED FRAME.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)

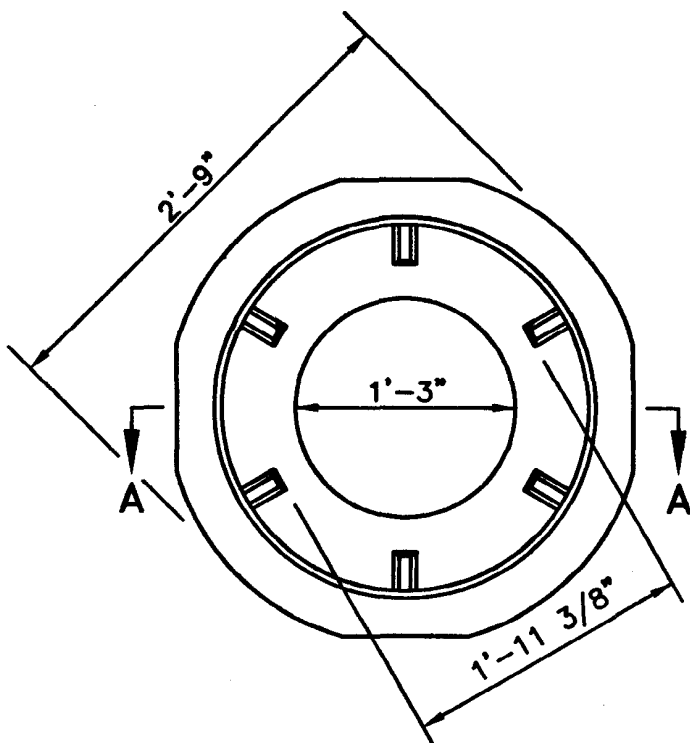
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

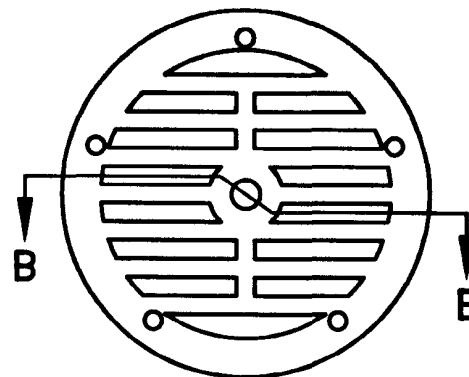
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

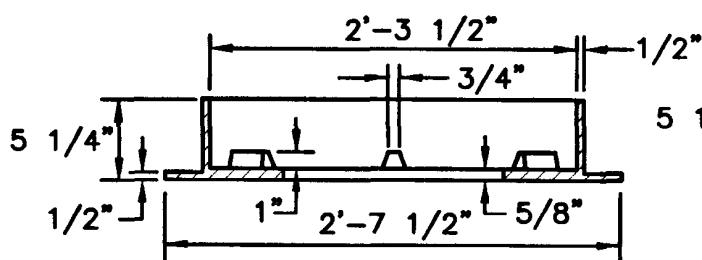
R.I.  
STANDARD  
6.3.4



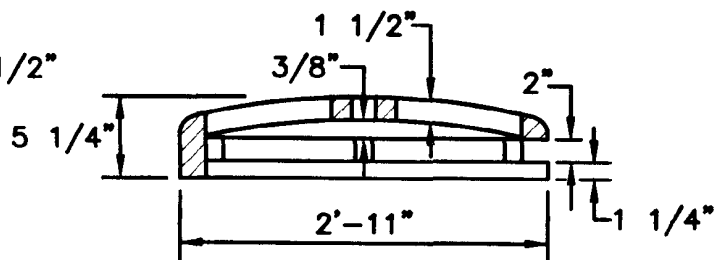
**FRAME**



**GRATE**



**SECTION A-A**



**SECTION B-B**

**NOTE:**

FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

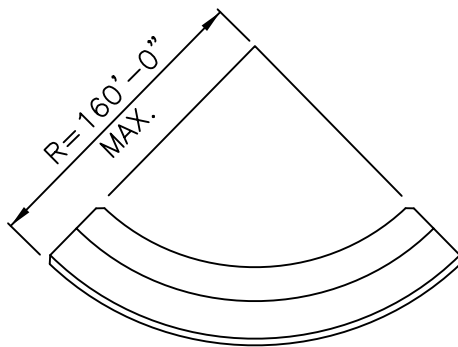
**ROUND FRAME AND GRATE**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

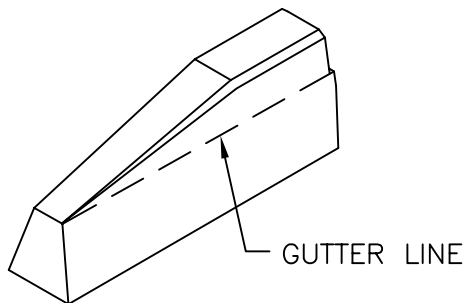
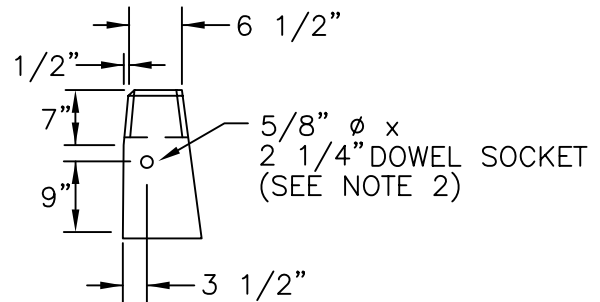
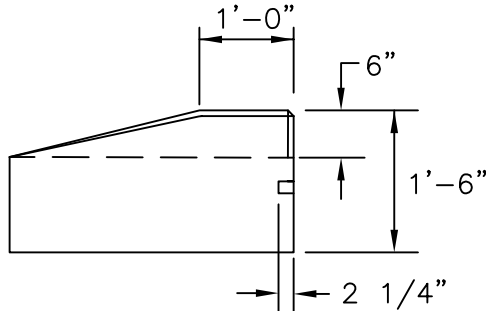
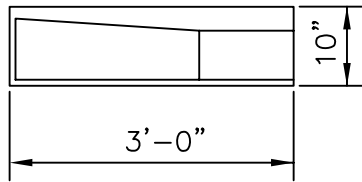
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





R.I.  
STANDARD  
7.1.0



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION, FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**3'-0" PRECAST CONCRETE  
TRANSITION CURB**

**R.I.  
STANDARD  
7.1.1**

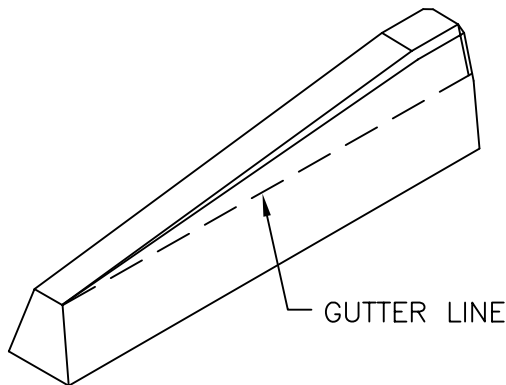
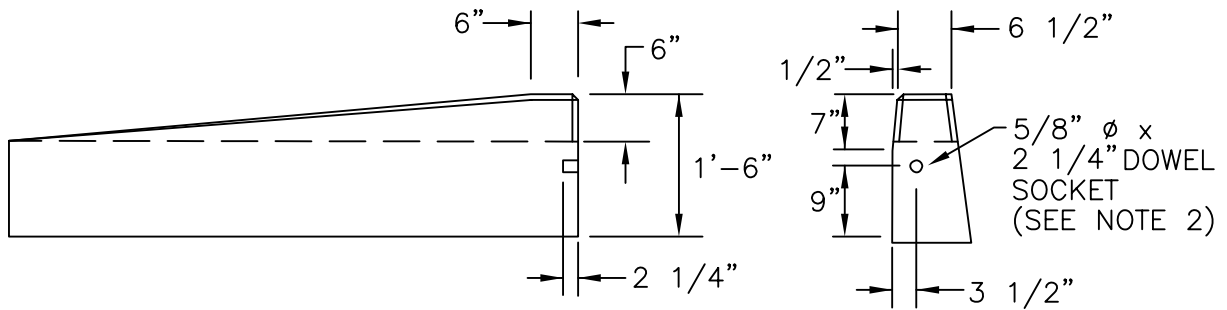
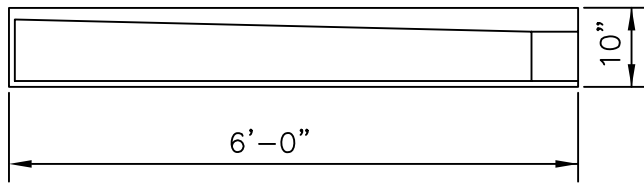
**REVISIONS**

NO.	BY	DATE
1	MLP	Mar 05

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

**6'-0" PRECAST CONCRETE  
TRANSITION CURB**

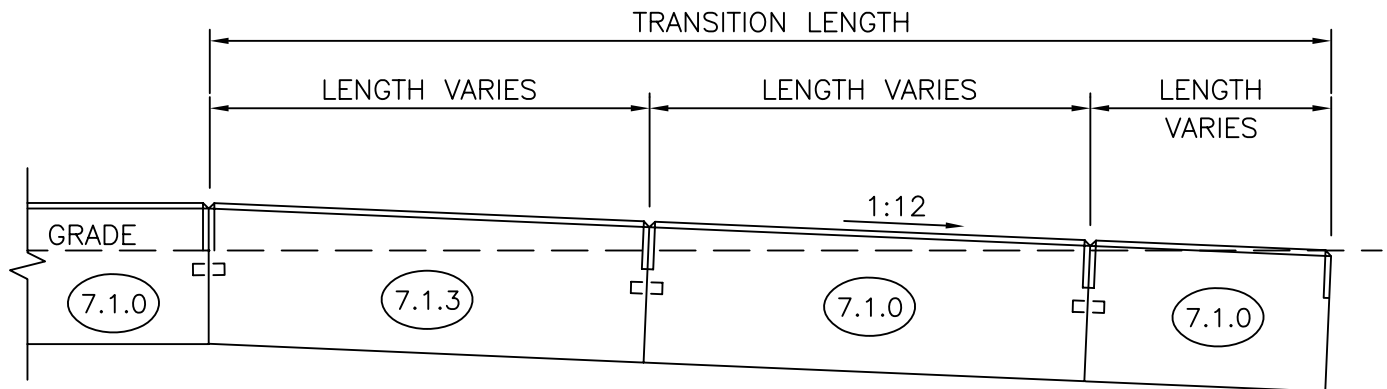
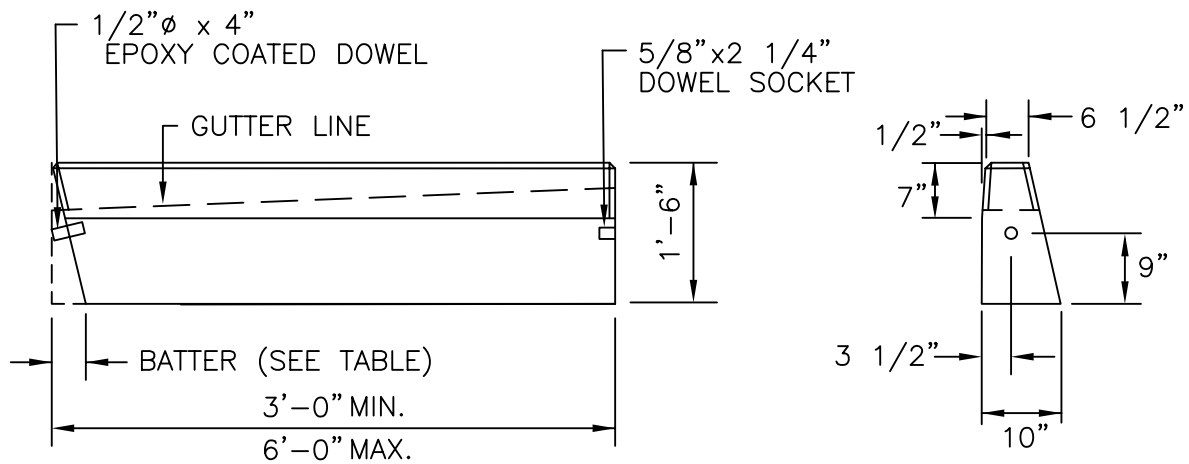
*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
5. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

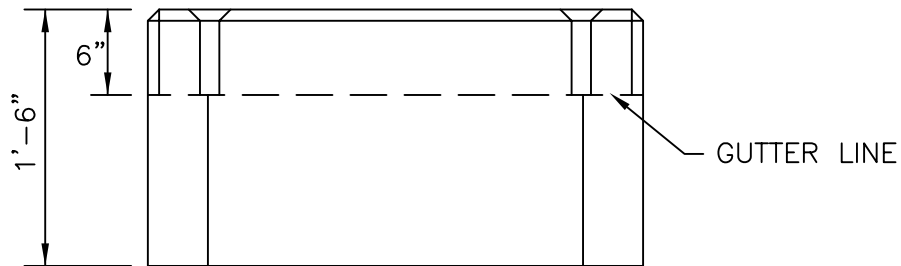
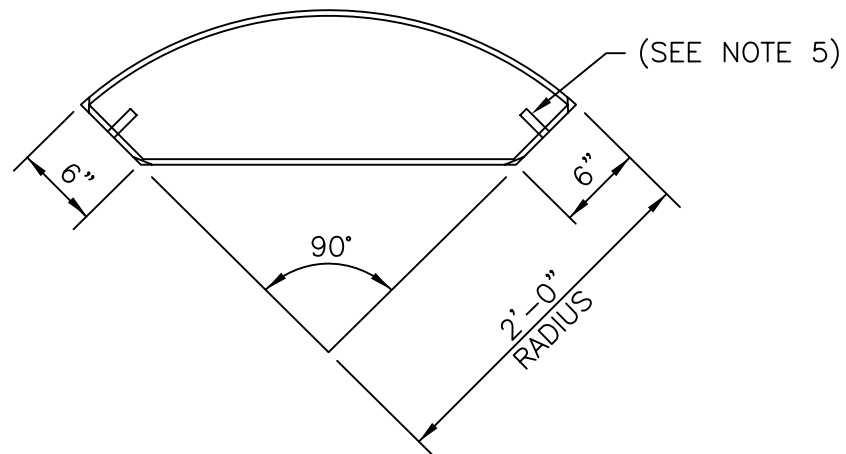
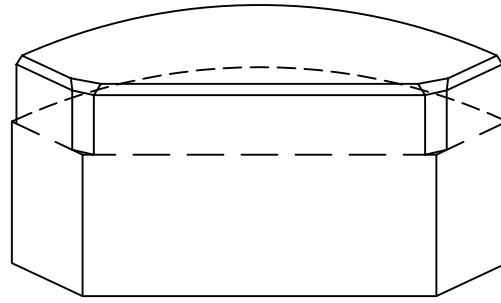
**PRECAST CONCRETE WHEELCHAIR RAMP  
TRANSITION CURB**

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





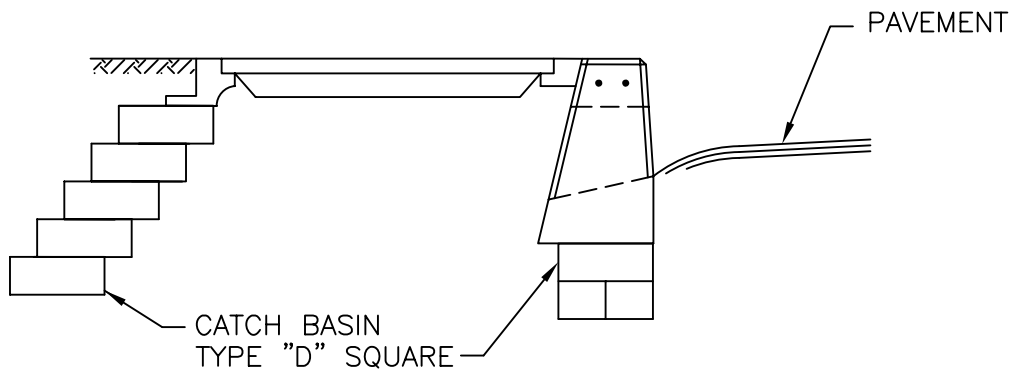
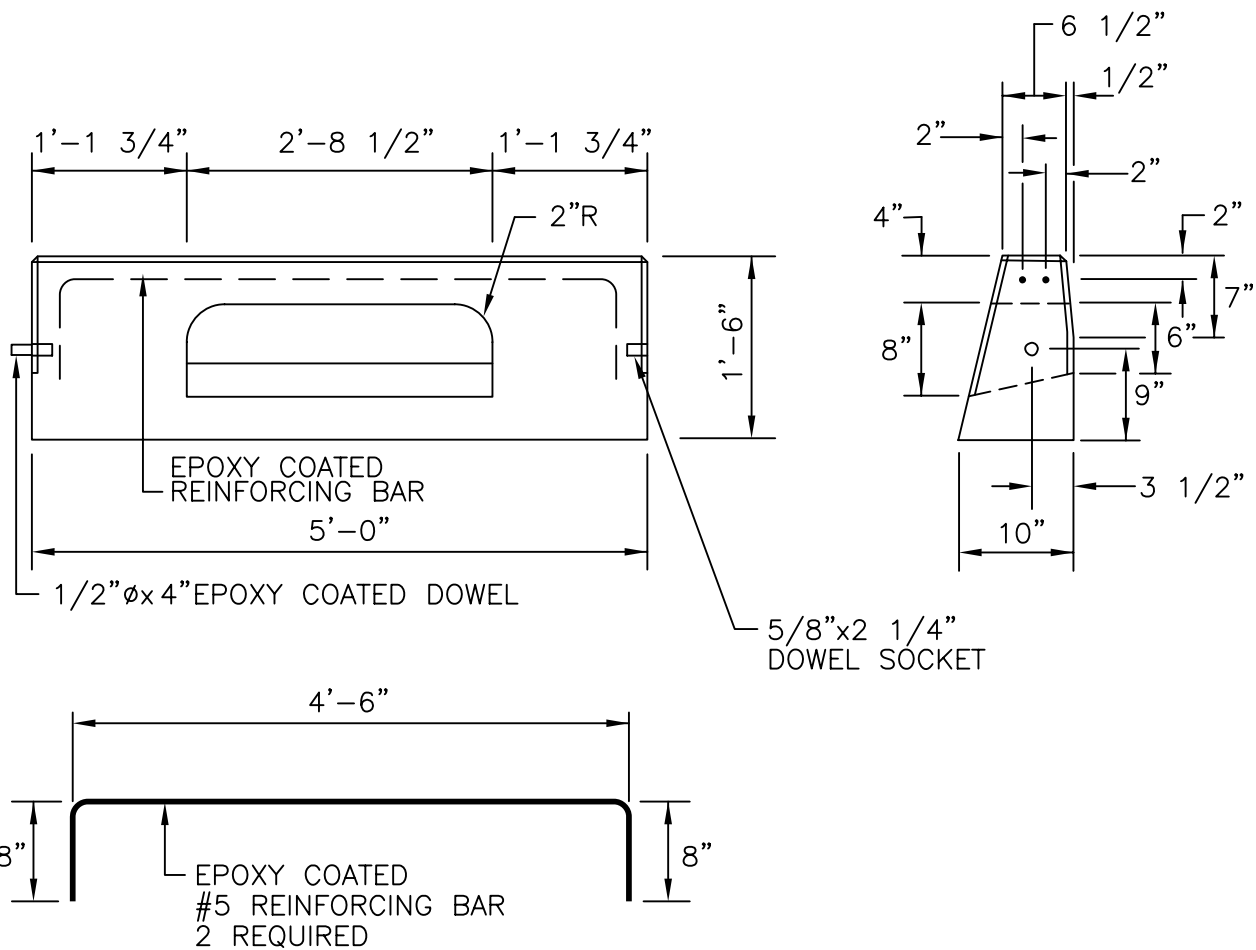


**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. NO REINFORCEMENT REQUIRED.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. SEE STD. 7.1.0 FOR DOWEL SOCKET LOCATION.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			PRECAST CONCRETE 2'-0" RADIUS CORNER	<div><div>R.I. STANDARD 7.1.4</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		
			<div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div>	



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE INLET STONE  
(FOR SQUARE CATCH BASIN)**

**REVISIONS**

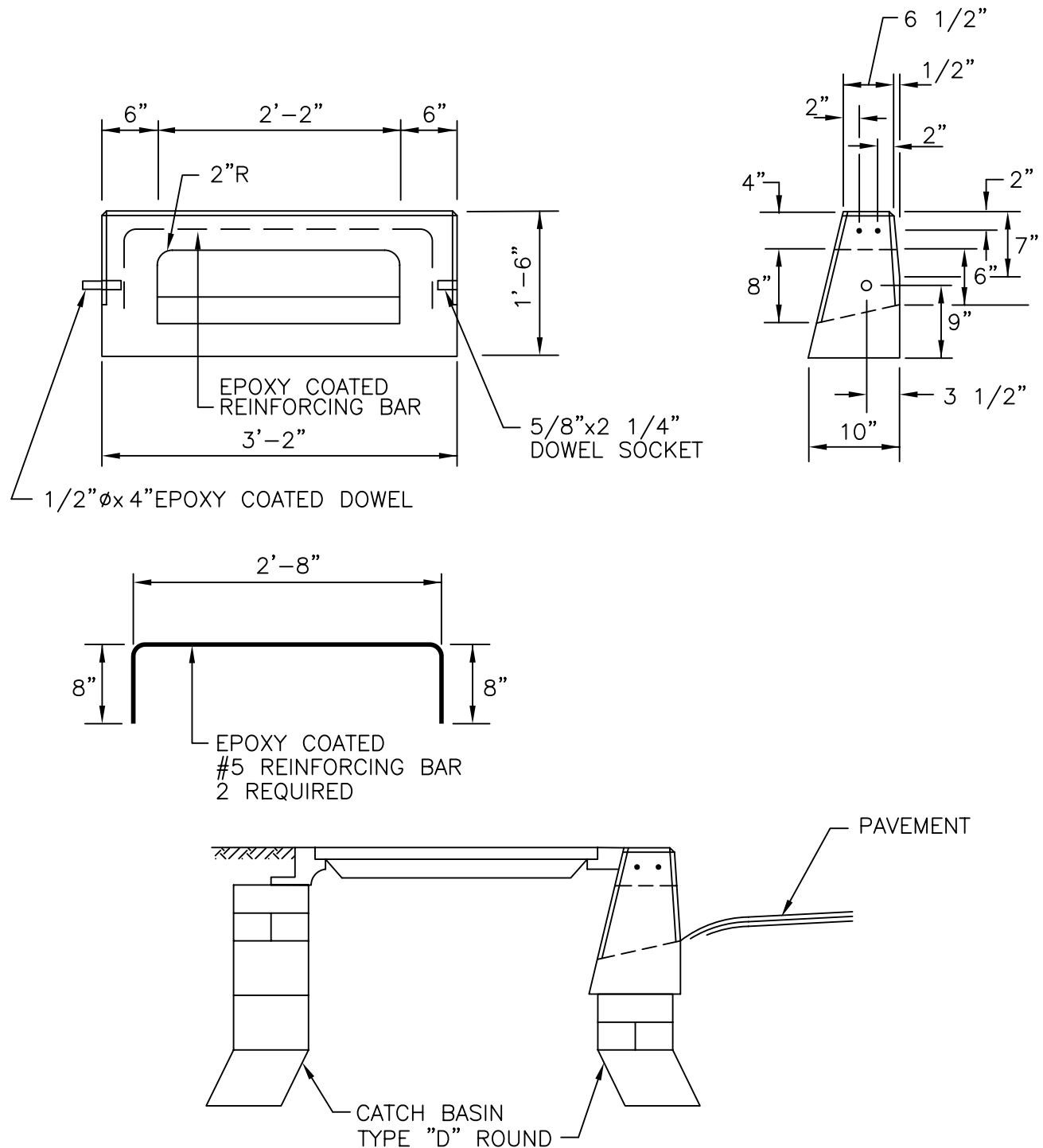
NO.	BY	DATE
1	MLP	Mar 05

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



R.I.  
STANDARD  
7.1.5



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

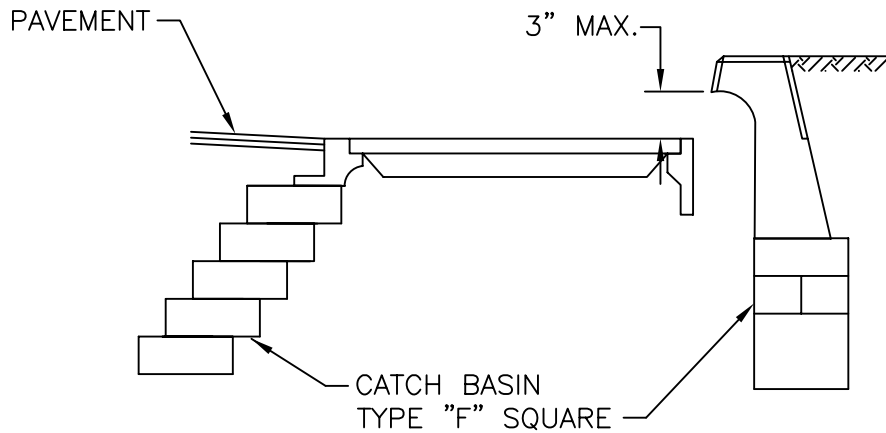
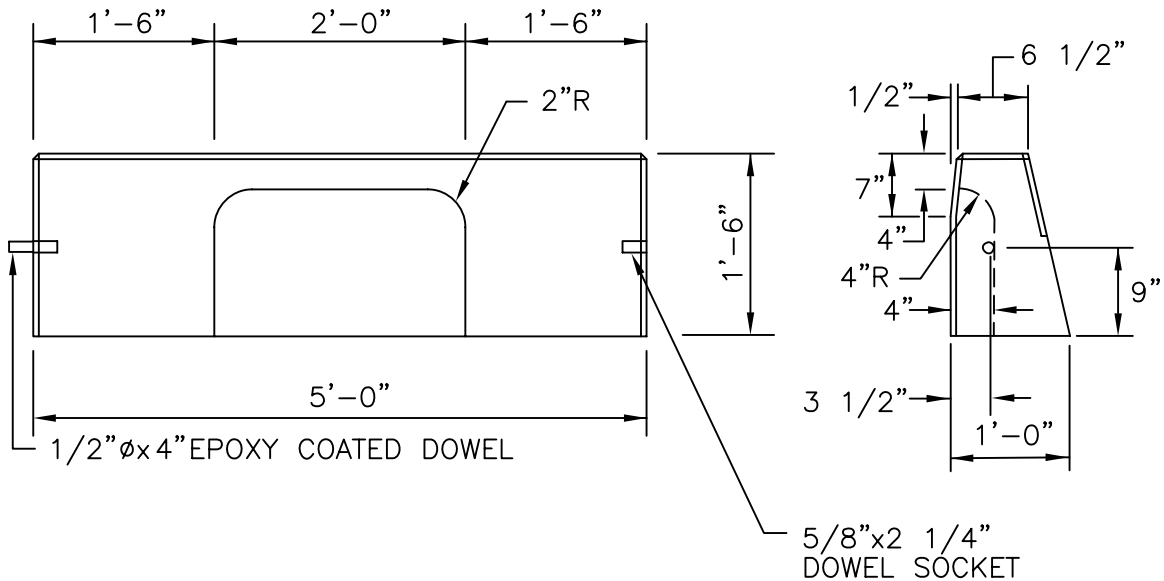
**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN)	<div><div>R.I. STANDARD 7.1.6</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		
			<div><div></div><div>CHIEF ENGINEER TRANSPORTATION</div></div>	
			<div><div></div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div>	
				<div>JUNE 15, 1998 ISSUE DATE</div>

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE APRON STONE  
(FOR SQUARE CATCH BASIN)**

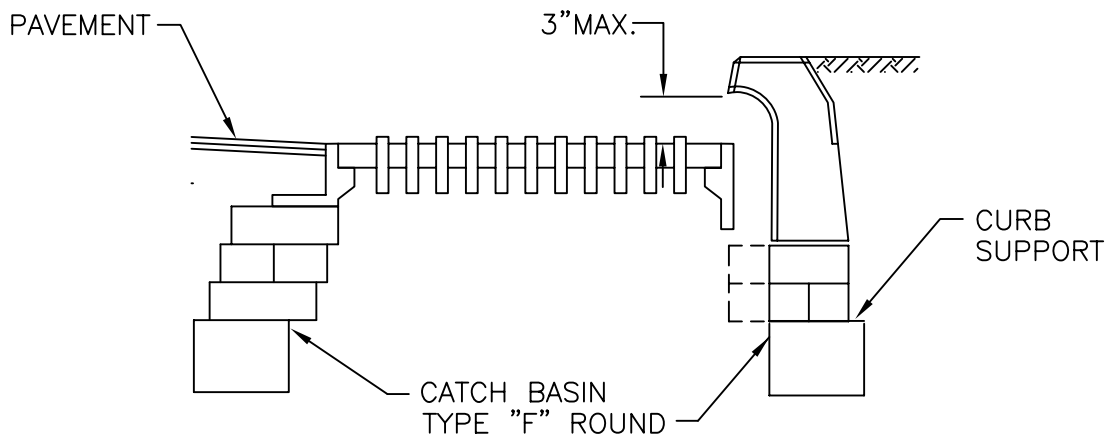
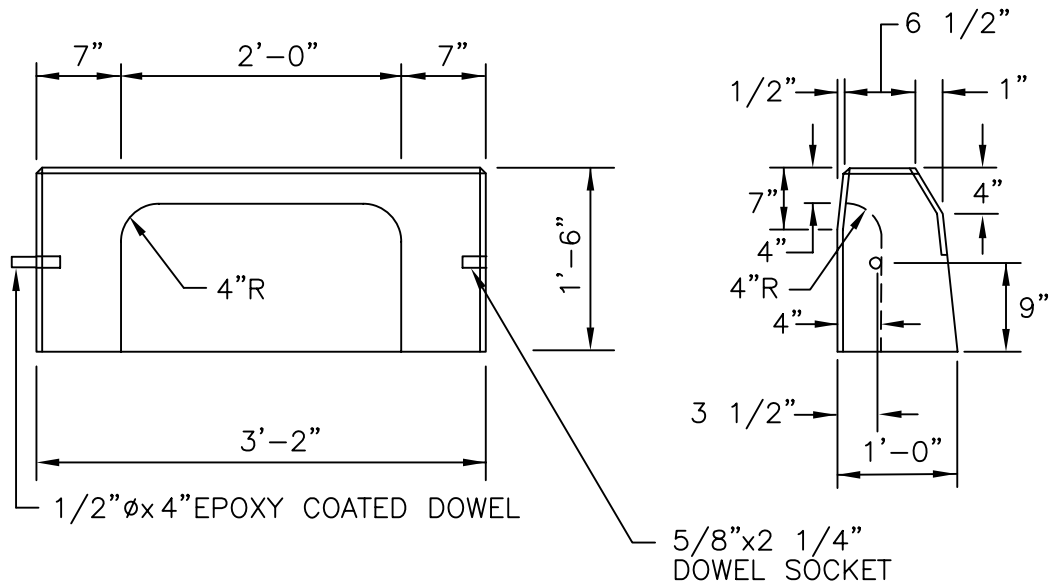
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST CONCRETE APRON STONE  
(FOR ROUND CATCH BASIN)**

**REVISIONS**

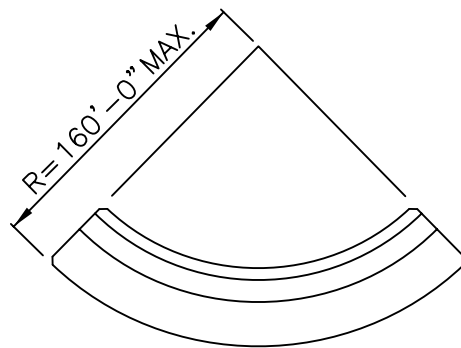
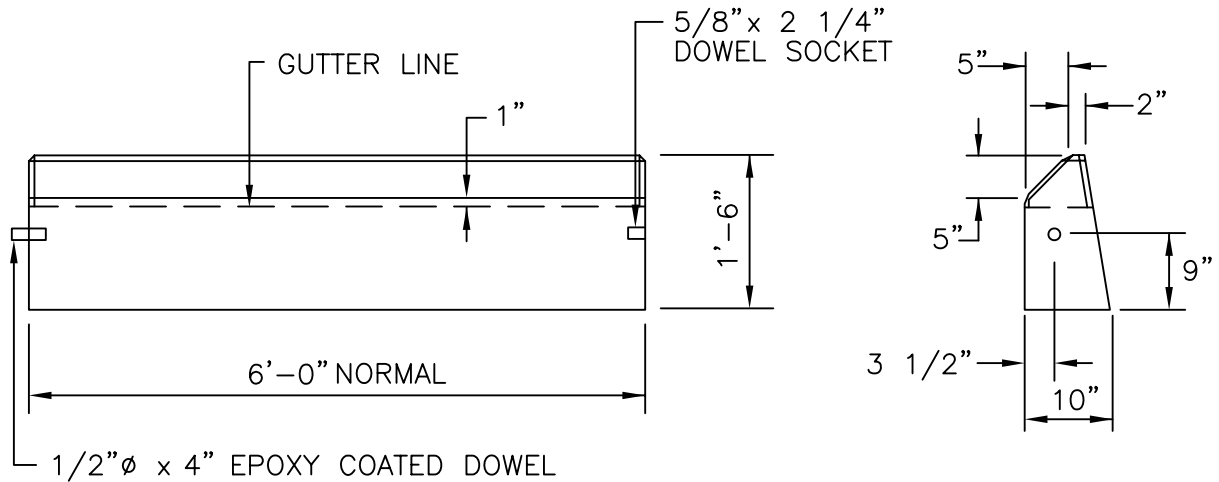
NO.	BY	DATE
1	MLP	Mar 05

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
7.1.8





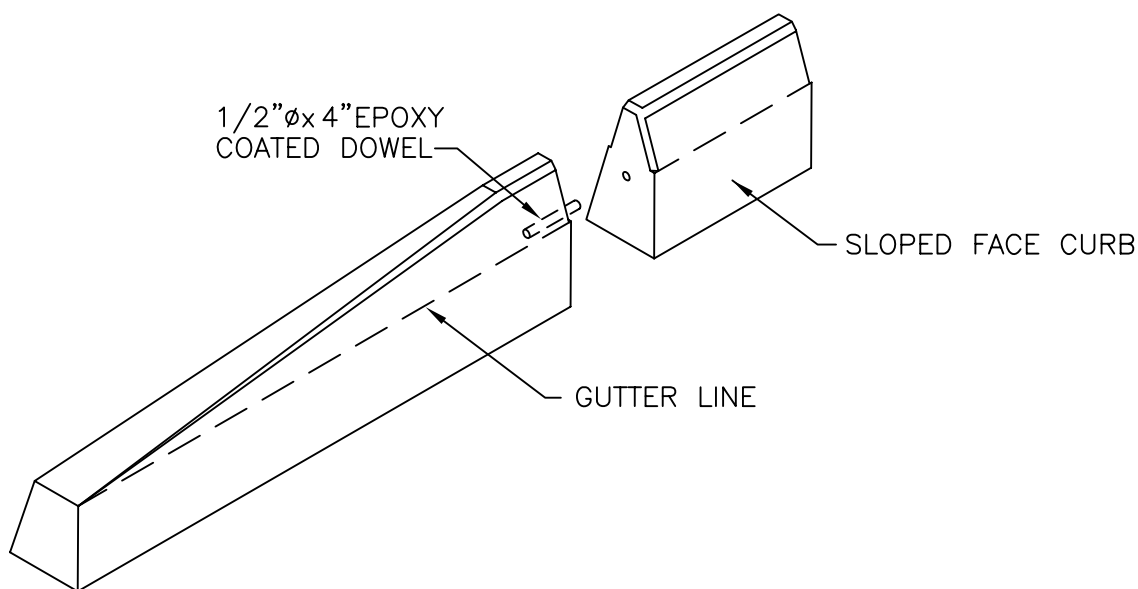
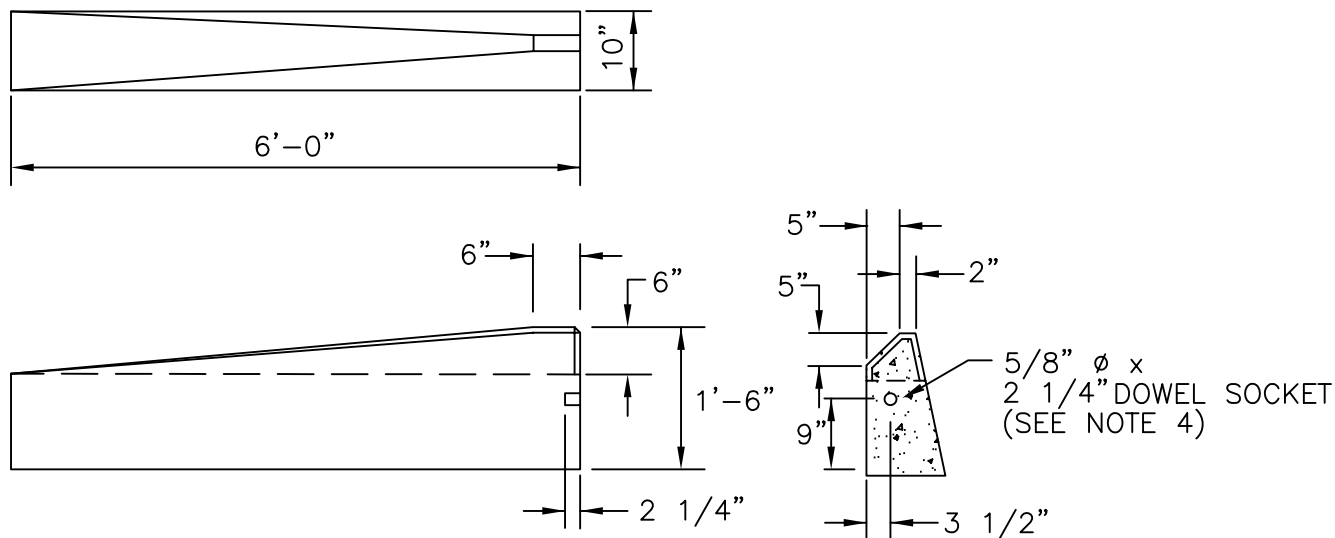
### CIRCULAR CURB

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
5. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PRECAST CONCRETE SLOPED FACE CURB		<div><div>R.I. STANDARD 7.2.0</div></div>
NO.	BY	DATE			
1	MLP	Mar 05	<div><div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div>JUNE 15, 1998 ISSUE DATE</div></div>		



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

**PRECAST CONCRETE  
SLOPED FACE TRANSITION CURB**

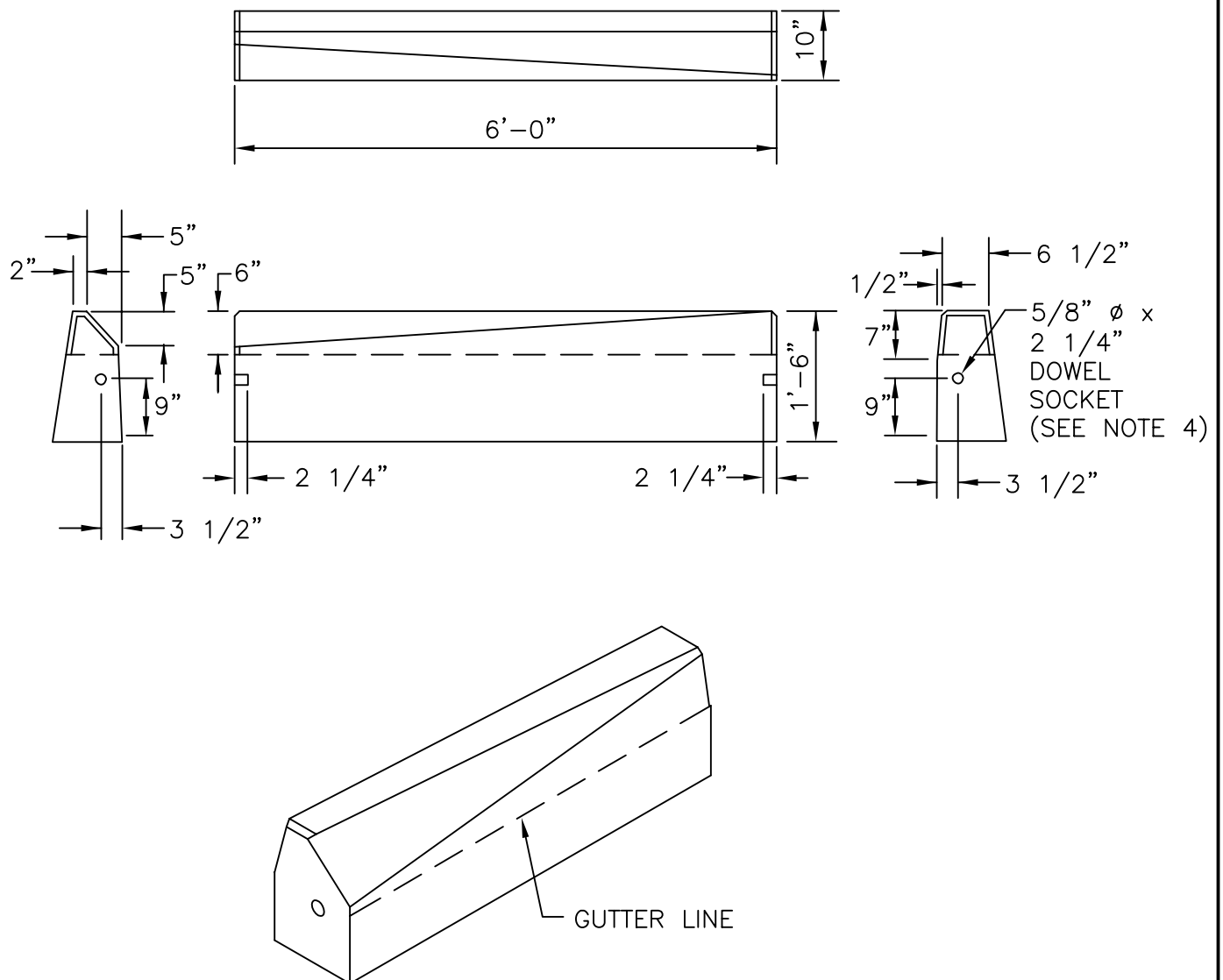
*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







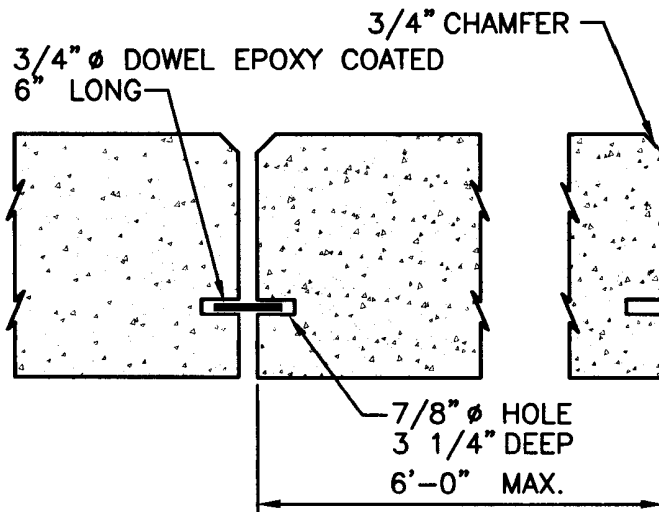


**NOTES:**

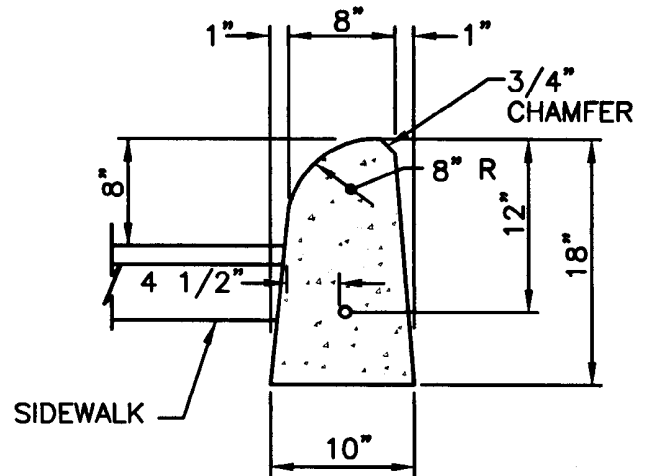
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
3. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
4. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2"  $\phi$  x 4" EPOXY COATED DOWEL.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE)		<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.2.2 </div>
NO.	BY	DATE			
1	MLP	Mar 05			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	
				JUNE 15, 1998 ISSUE DATE	

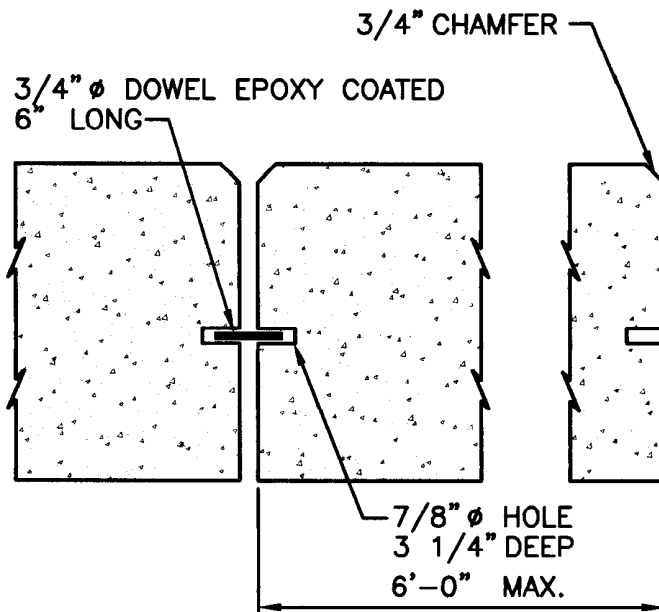


LONGITUDINAL SECTION @ JOINT

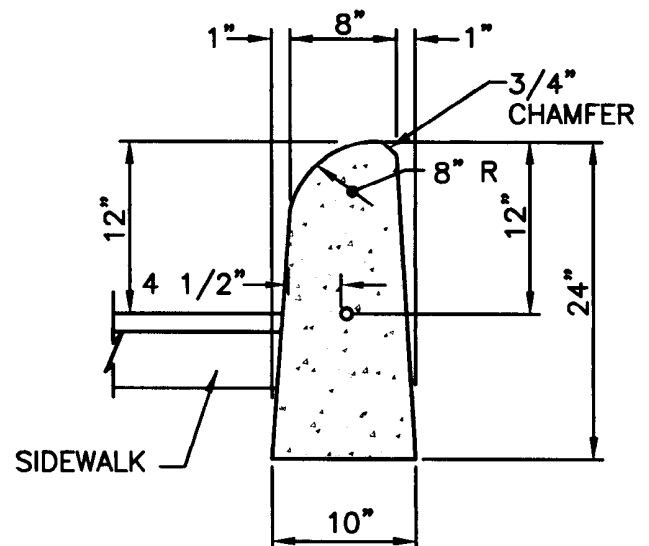


END SECTION

1'-6" LOT CURB



LONGITUDINAL SECTION @ JOINT



END SECTION

2'-0" LOT CURB

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. 1/8" JOINTS DOWELED WITH A 3/4" Ø DOWEL 6" LONG.
3. TOP AND EXPOSED SURFACES TO H+ 2" TO HAVE A SPONGE FLOAT FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE LOT CURB

REVISIONS

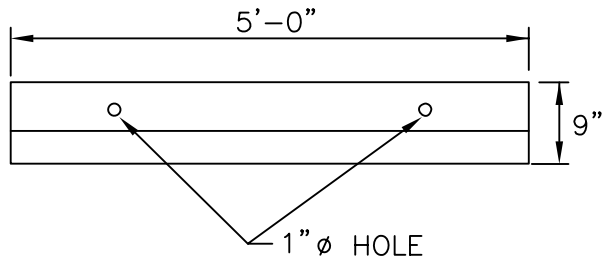
NO.	BY	DATE

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

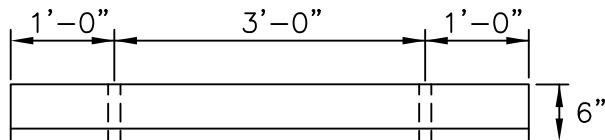
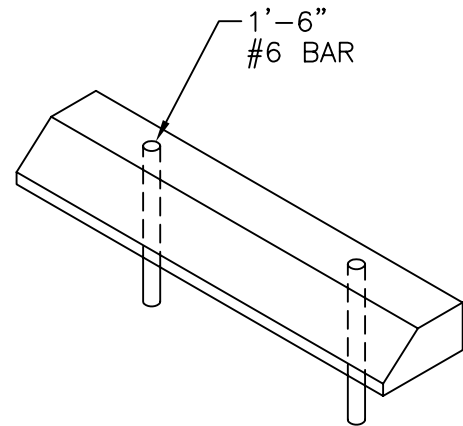
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

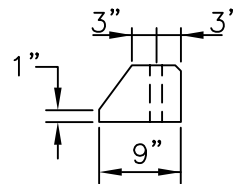
R.I.  
STANDARD  
7.2.3



PLAN



FRONT ELEVATION





SIDE ELEVATION

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED EDGES TO HAVE A 3/4" CHAMFER.
3. ALL SURFACES TO HAVE A SPONGE FLOAT FINISH.

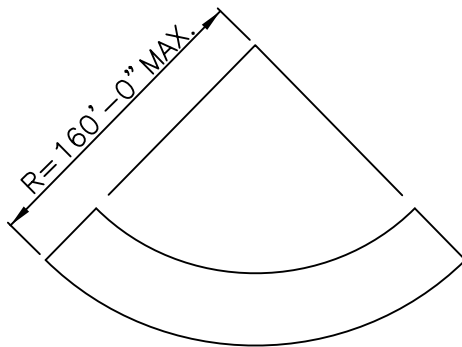
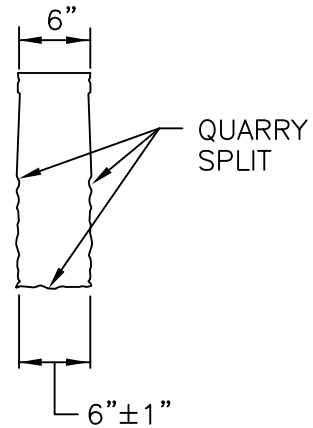
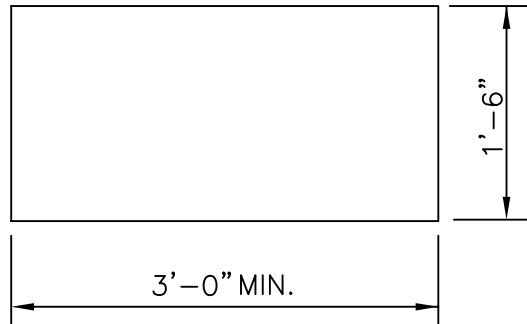
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			PRECAST CONCRETE CAR STOPS	<div><div>R.I. STANDARD 7.2.4</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		
			<div><div><div></div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div></div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>	

*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





## CIRCULAR CURB

### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

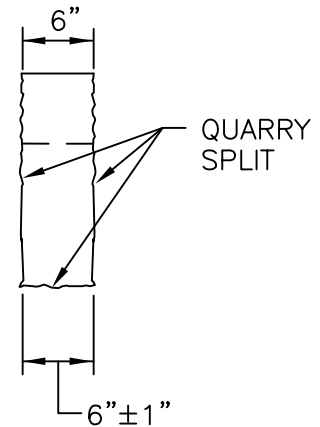
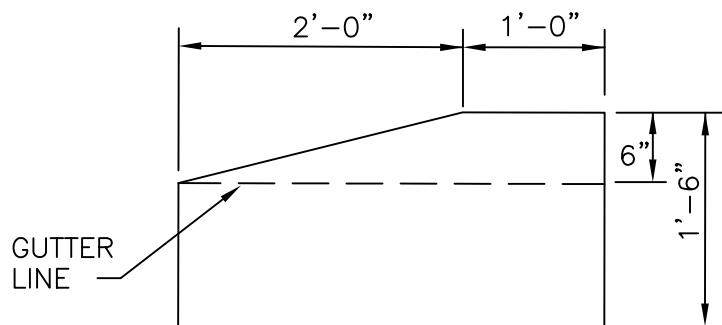
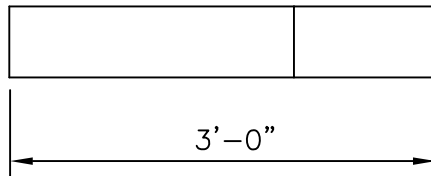
REVISIONS			GRANITE CURB	<div><div>R.I. STANDARD 7.3.0</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		

 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE
---	--	-----------------------------

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION



JUNE 15, 1998  
ISSUE DATE

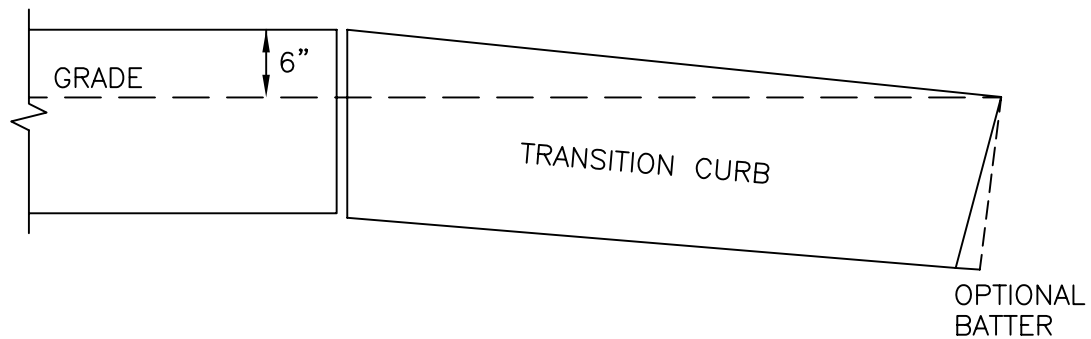
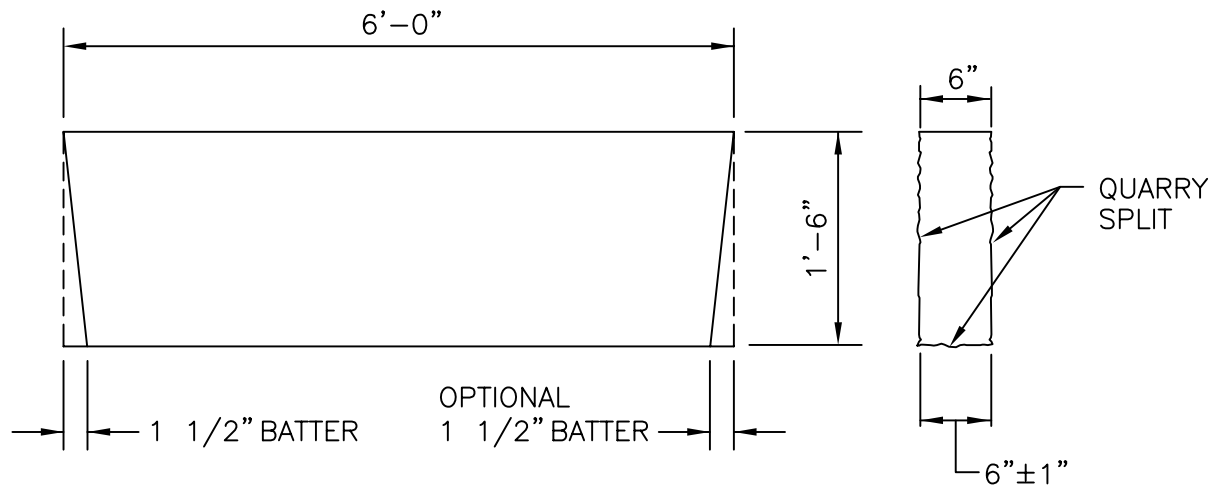


NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			3'-0" GRANITE TRANSITION CURB	<div> <div>R.I.</div> <div>STANDARD</div> <div>7.3.1</div> </div>
NO.	BY	DATE		
1	MLP	Mar 05		
			 CHIEF ENGINEER TRANSPORTATION	
			 CHIEF DESIGN ENGINEER TRANSPORTATION	
			JUNE 15, 1998	
			ISSUE DATE	



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

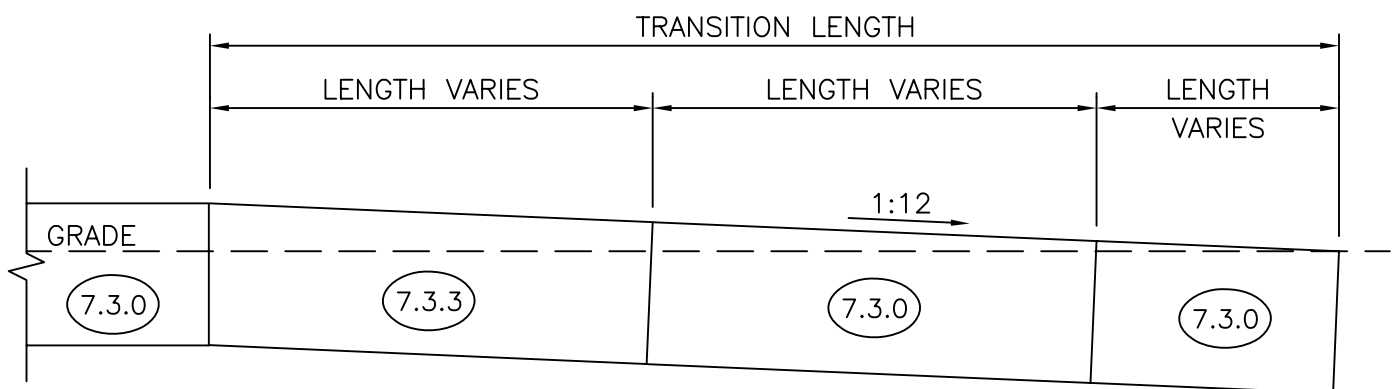
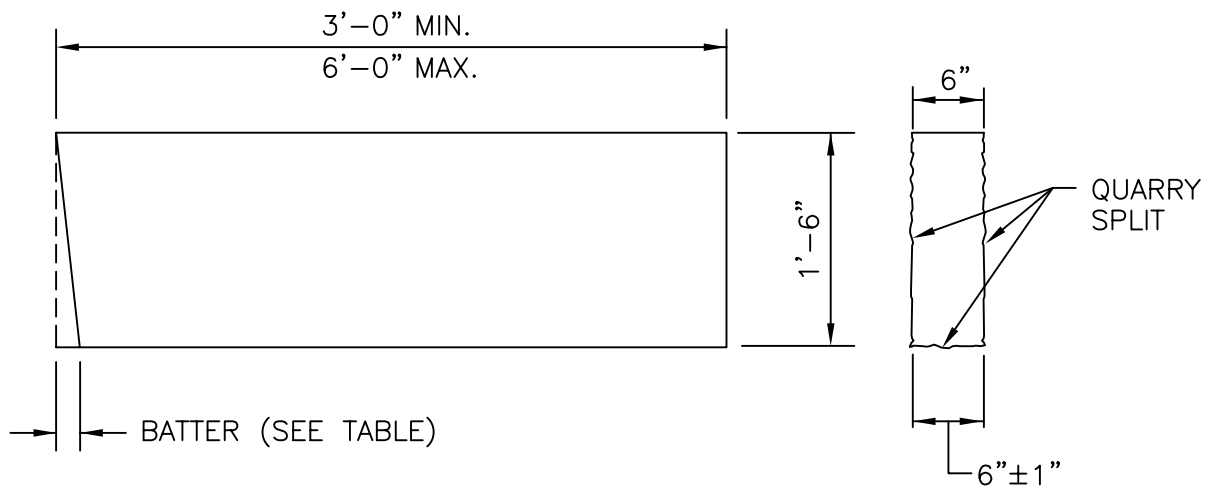
**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			6'-0" GRANITE TRANSITION CURB	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.3.2 </div>
NO.	BY	DATE		
1	MLP	Mar 05		

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





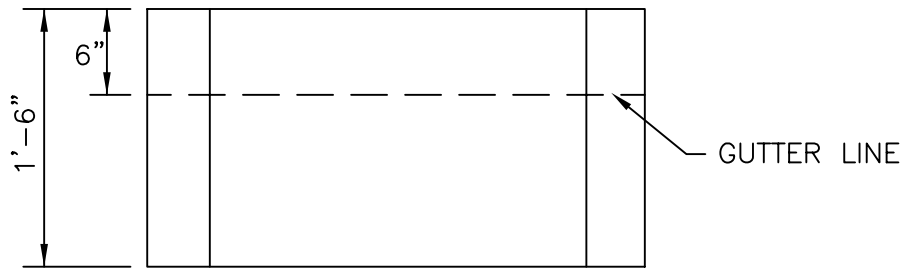
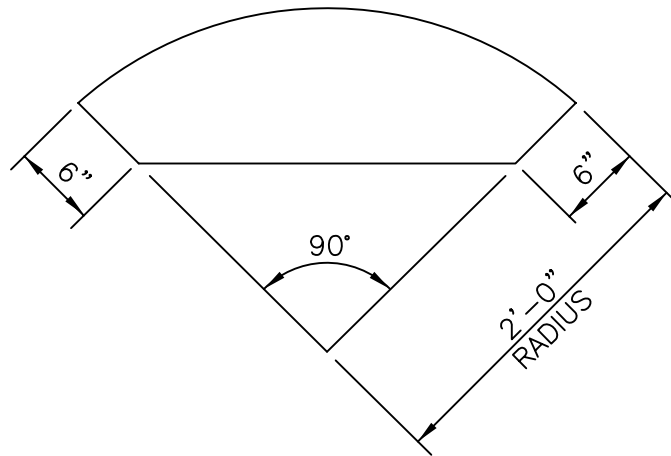
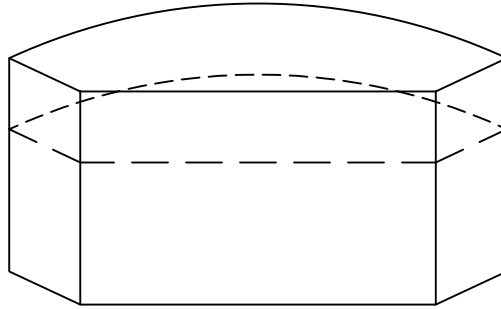
TRANSITION LENGTH (FT.)	BATTER (IN.)
6.0	1.5
7.0	1.3
8.0	1.2
9.5	1.0
11.5	0.8
15.0	0.6
18.0	0.5

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR CURB FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
4. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**



REVISIONS			GRANITE WHEELCHAIR RAMP TRANSITION CURB		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.3.3 </div>
NO.	BY	DATE			
1	MLP	Mar 05			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	
				JUNE 15, 1998	
				ISSUE DATE	



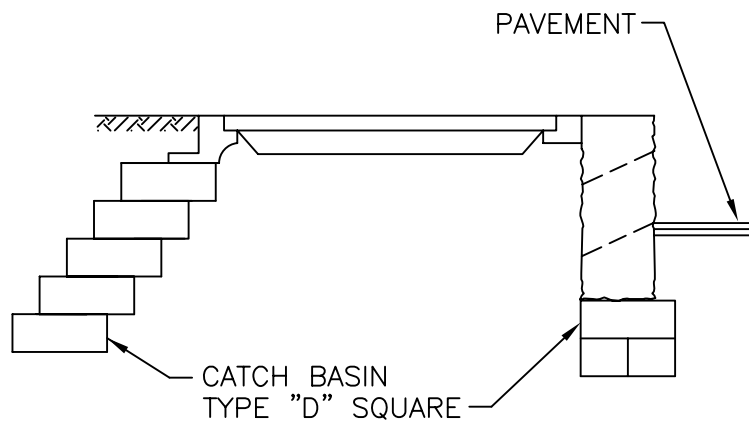
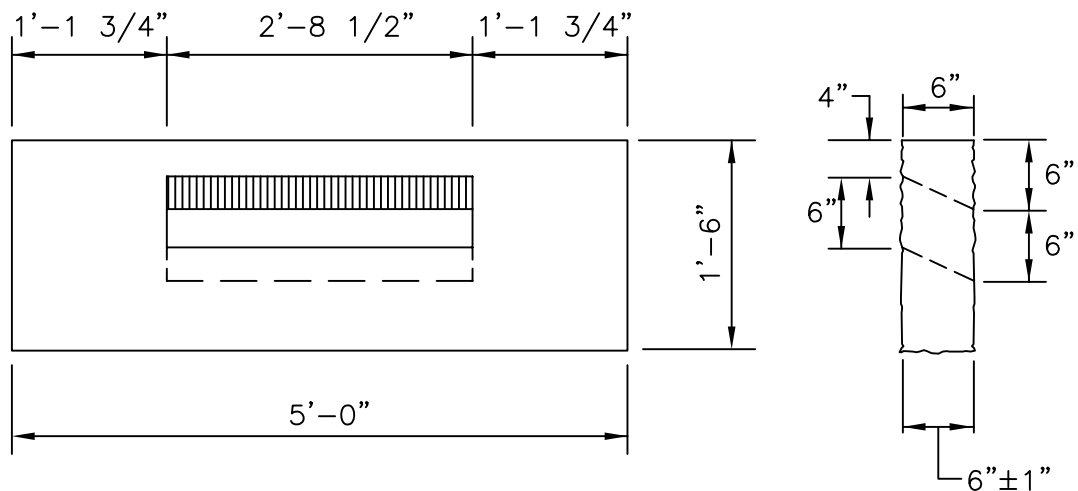
**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			GRANITE 2'-0" RADIUS CORNER	<div><div>R.I. STANDARD 7.3.4</div></div>	
NO.	BY	DATE			
1	MLP	Mar 05			
			<div><div></div><div>CHIEF ENGINEER TRANSPORTATION</div></div>	<div><div></div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div>	<div>JUNE 15, 1998</div> <div>ISSUE DATE</div>





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GRANITE INLET STONE  
(FOR SQUARE CATCH BASIN)**

R.I.  
STANDARD  
7.3.5

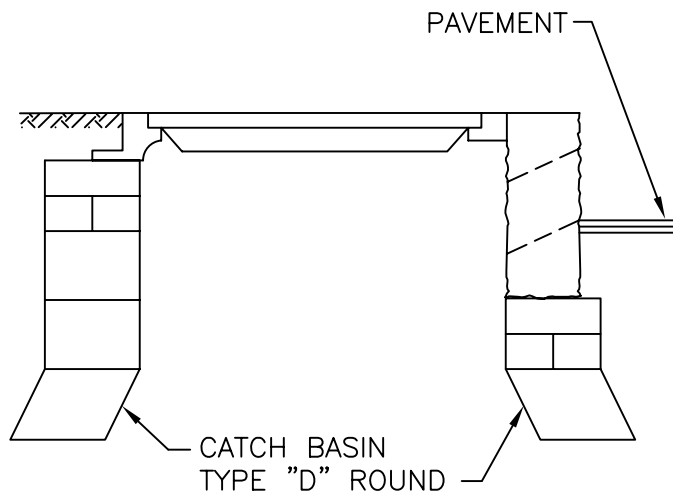
**REVISIONS**

NO.	BY	DATE
1	MLP	Mar 05

CHIEF ENGINEER  
TRANSPORTATION

CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



GRANITE INLET STONE  
(FOR ROUND CATCH BASIN)

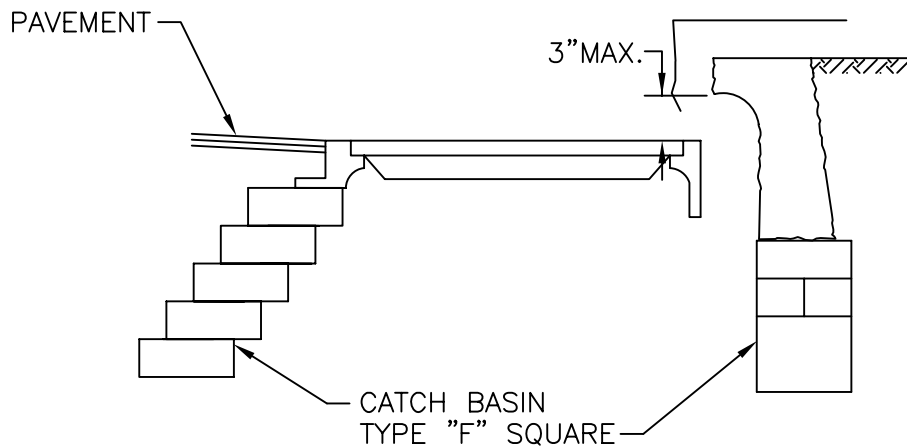
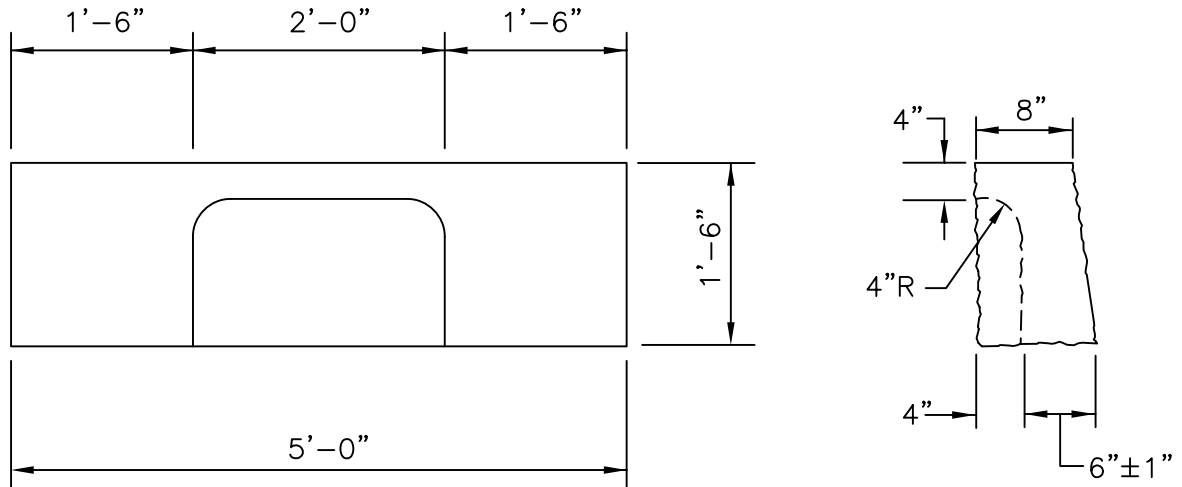
REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

CHIEF ENGINEER  
TRANSPORTATION

CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
7.3.6



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

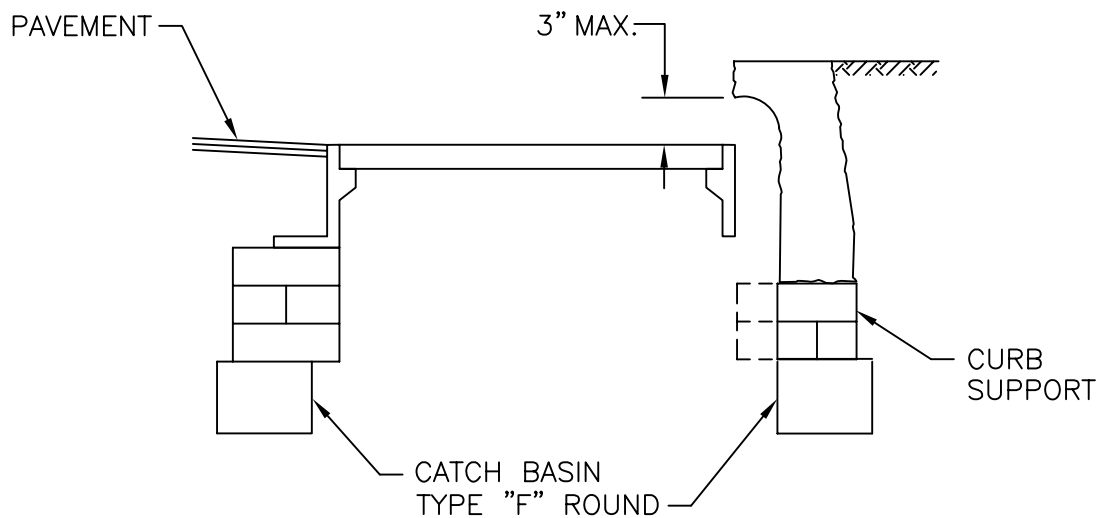
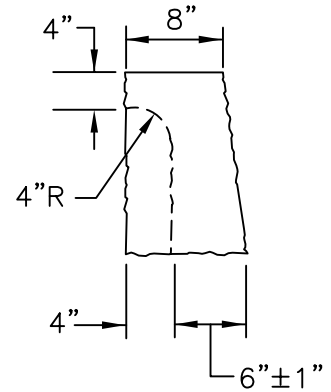
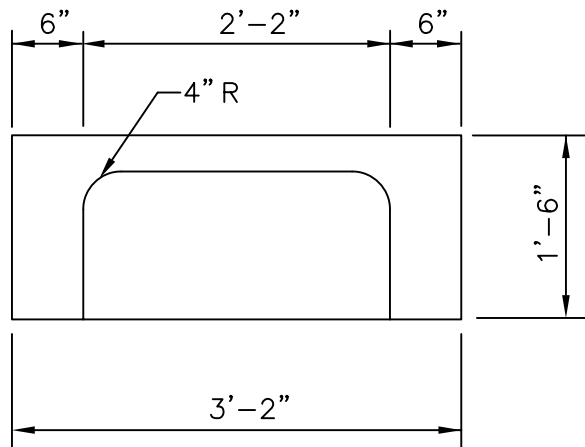
**GRANITE APRON STONE  
(FOR SQUARE CATCH BASIN)**

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GRANITE APRON STONE  
(FOR ROUND CATCH BASIN)**

**REVISIONS**

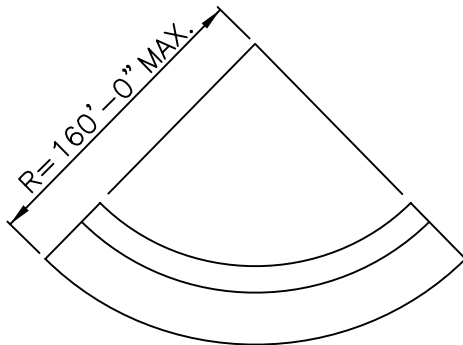
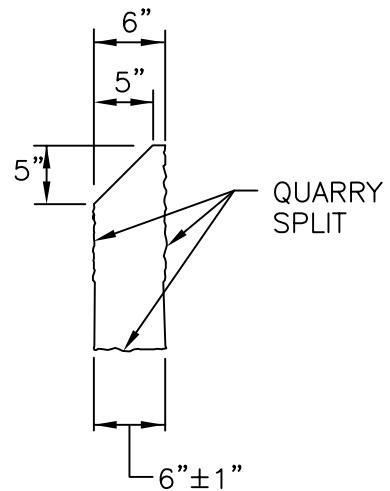
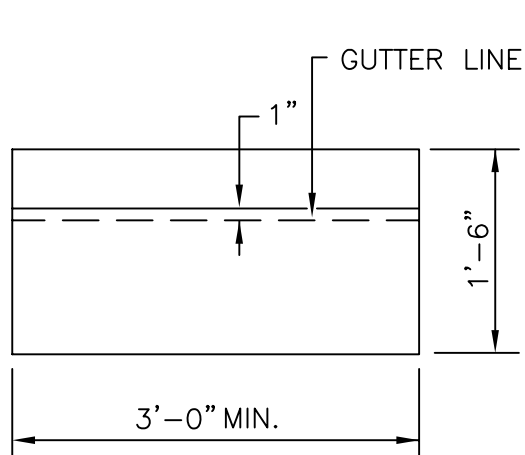
NO.	BY	DATE
1	MLP	Mar 05

*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Perkins Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
7.3.8


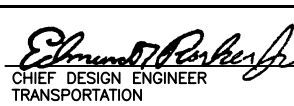


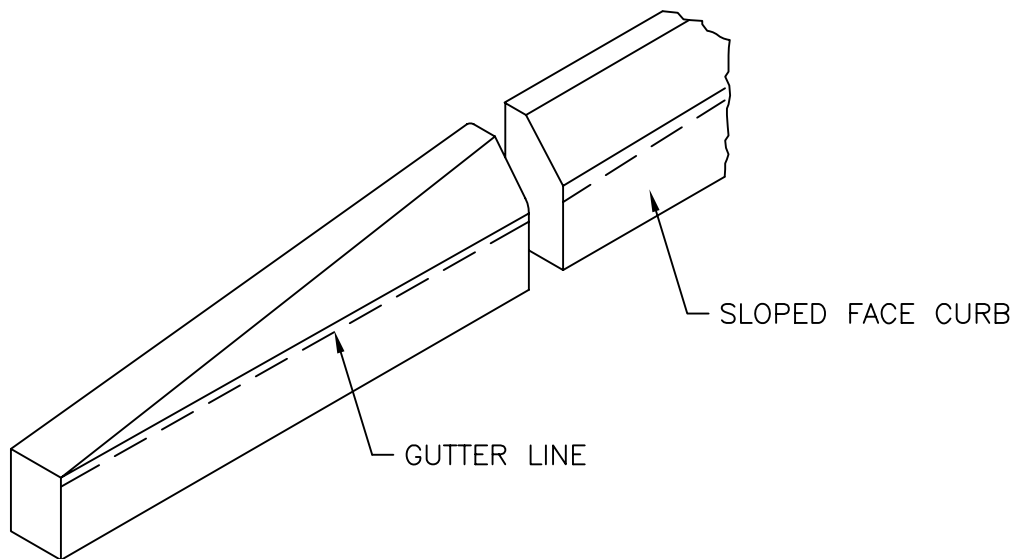
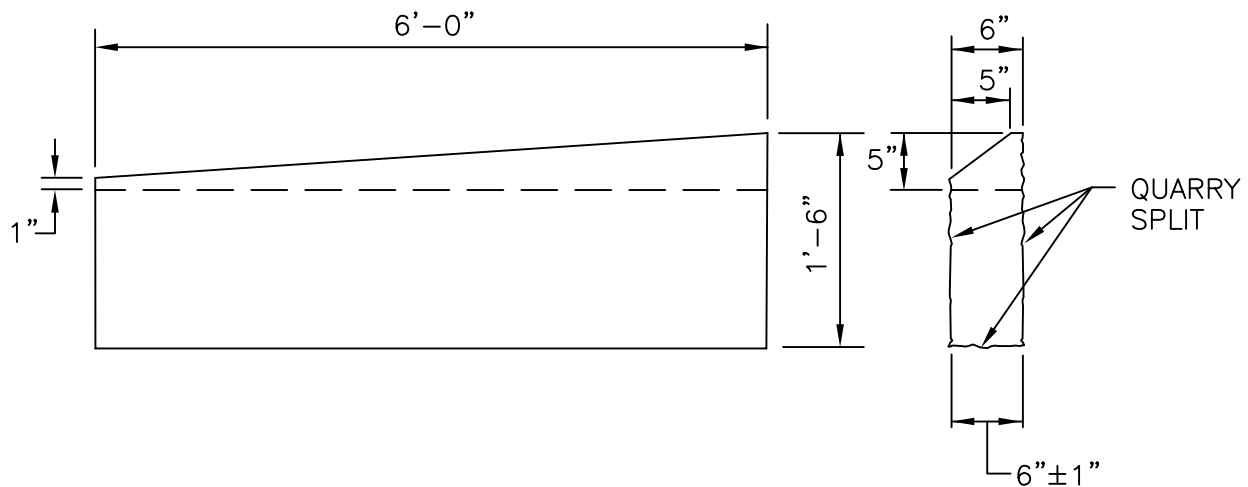
## CIRCULAR CURB

### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

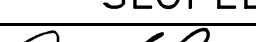
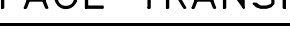
REVISIONS			GRANITE SLOPED FACE CURB		<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 7.4.0 </div>
NO.	BY	DATE			
1	MLP	Mar 05			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
3. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION. FOR OTHER DIRECTION USE OPPOSITE HAND.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			GRANITE SLOPED FACE TRANSITION CURB	<div><div>R.I. STANDARD 7.4.1</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		
			<div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div>	





REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

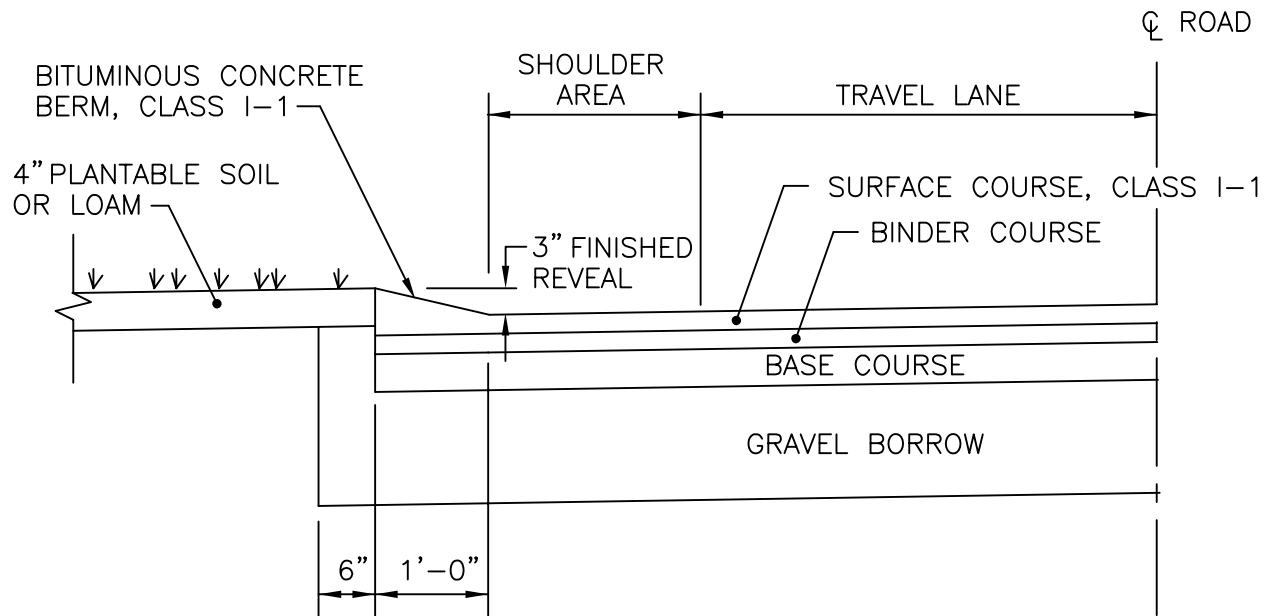
*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

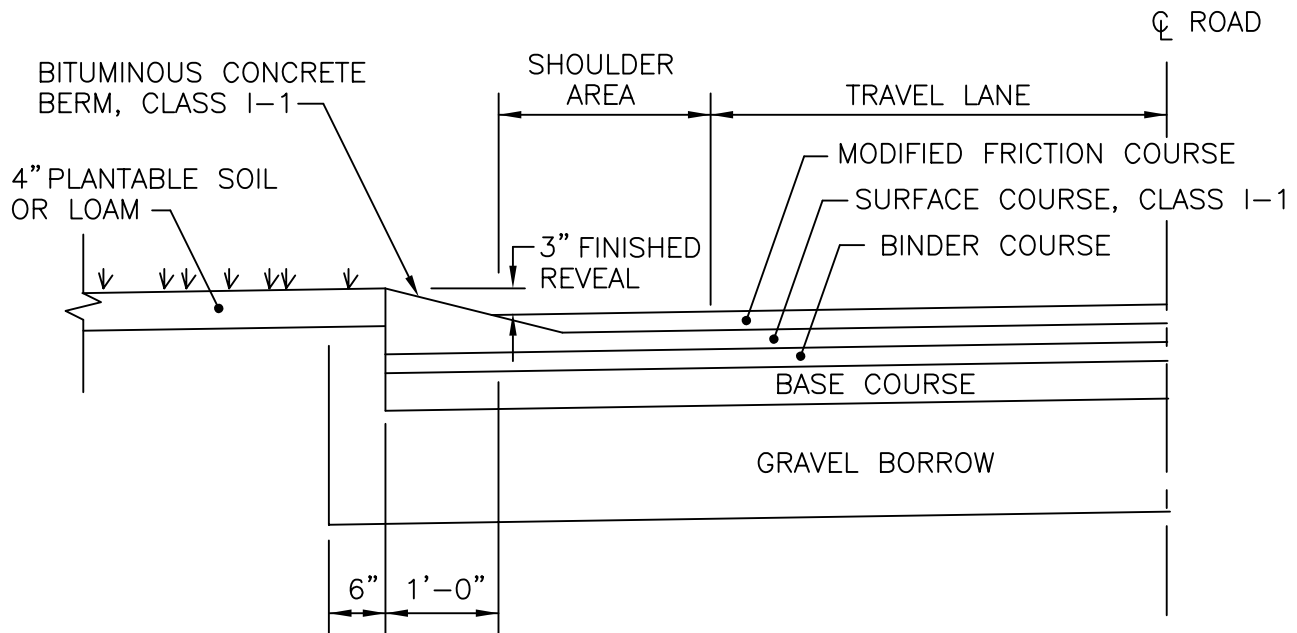
JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
7.5.0





CONSTRUCTION METHOD A



CONSTRUCTION METHOD B

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. BITUMINOUS BERM CAN BE PLACED AT THE SAME TIME THAT THE SURFACE COURSE LAYER IS PLACED ON THE PROJECT ROADWAY, OR IT CAN BE INSTALLED IN A SEPARATE OPERATION.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

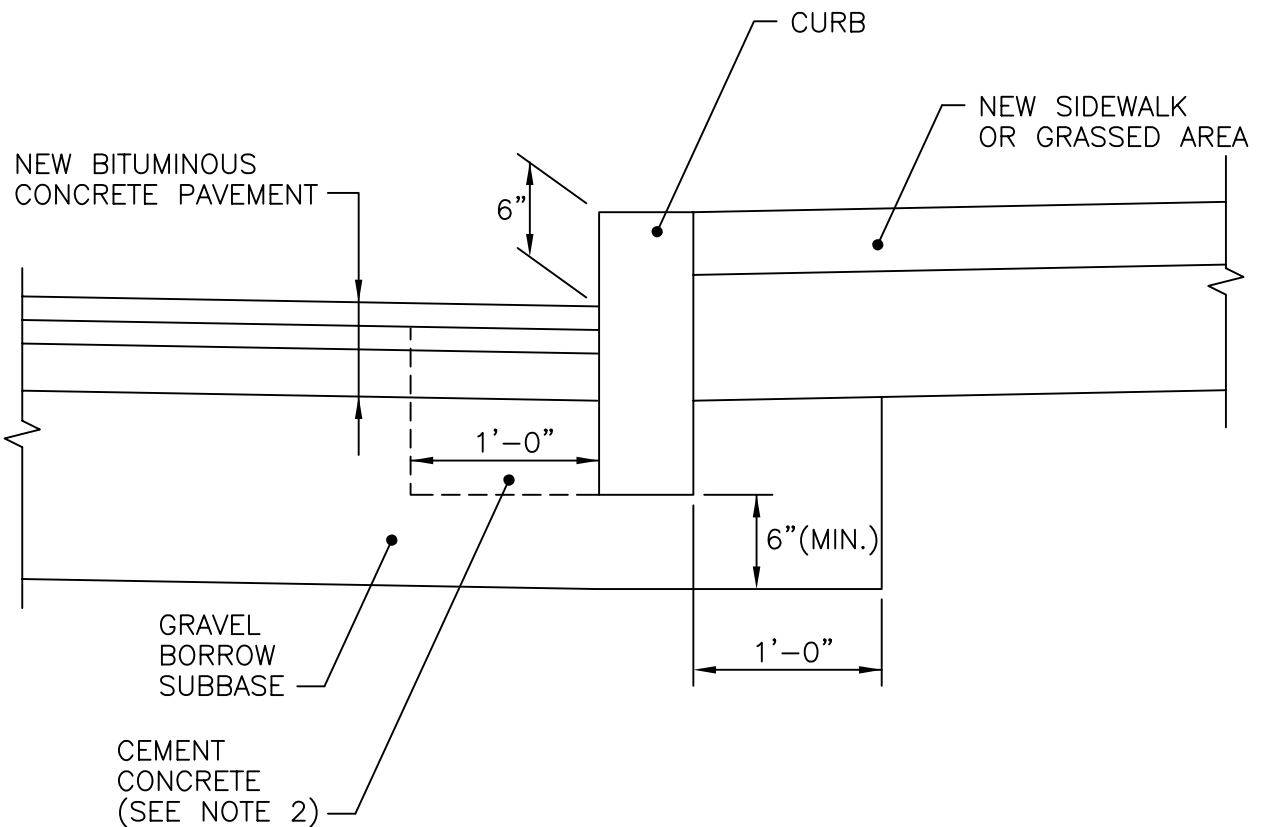
BITUMINOUS BERM

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

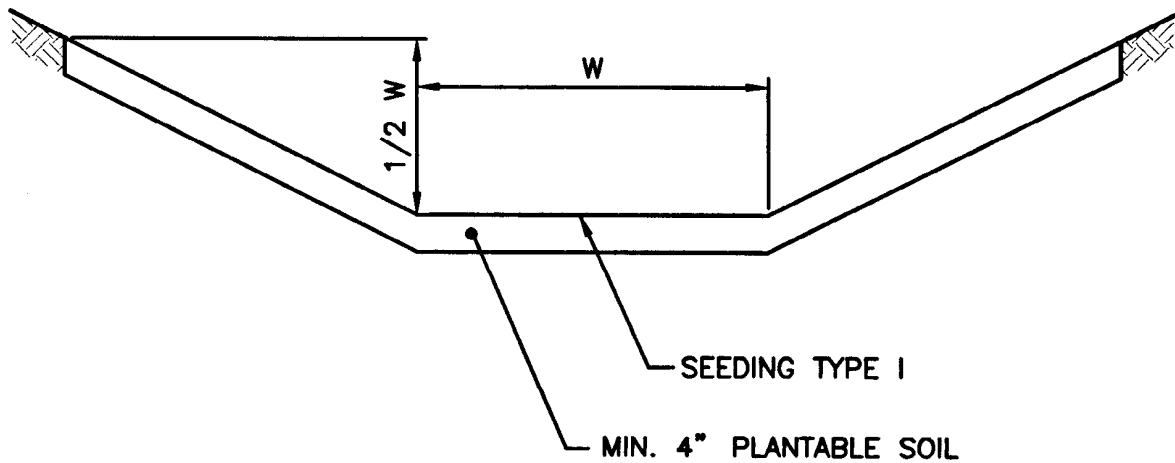
**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			CURB SETTING DETAIL	<div><div>R.I. STANDARD 7.6.0</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		
			<div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div>	

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION



JUNE 15, 1998  
ISSUE DATE

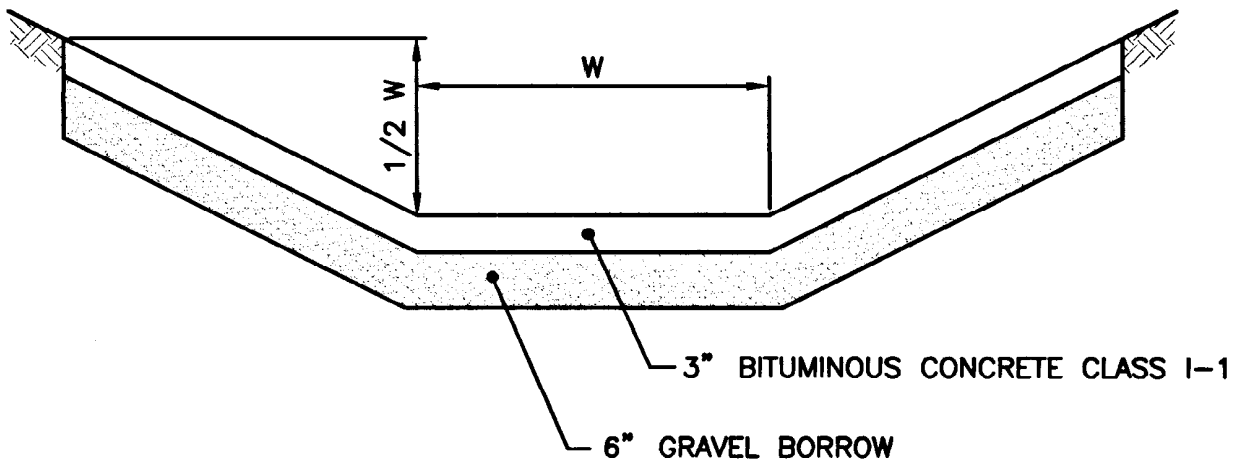


**NOTE:**

SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			SEEDED DITCH		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>8.1.0</b> </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">   CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">   CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998  ISSUE DATE </div> </div>		



**NOTE:**

SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

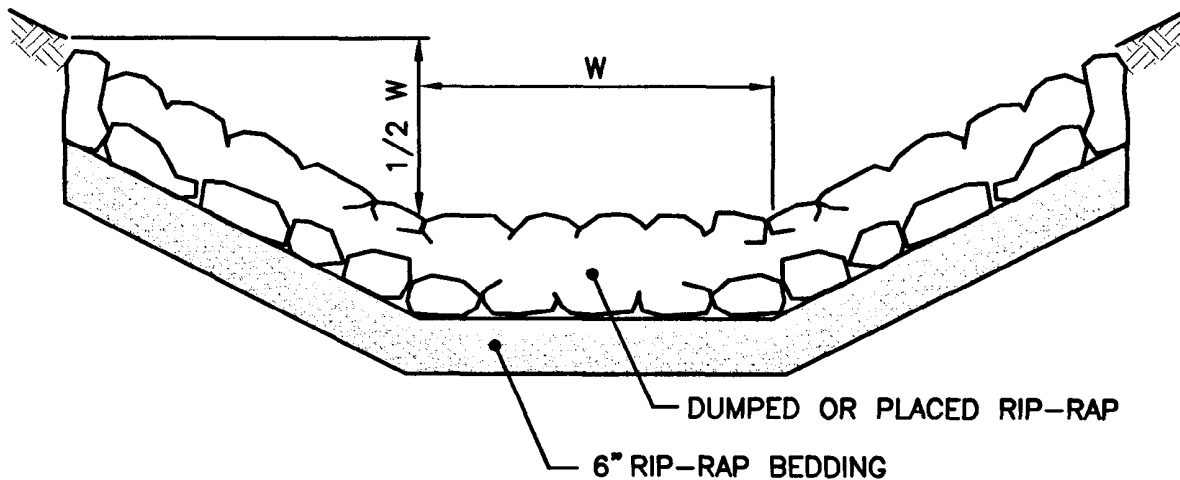
**BITUMINOUS CONCRETE DITCH**

*James A. Gagliardi*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
 ISSUE DATE





**NOTES:**

1. SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.
2. RIP-RAP AND BEDDING SIZE MAY VARY. SEE CONTRACT DOCUMENTS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

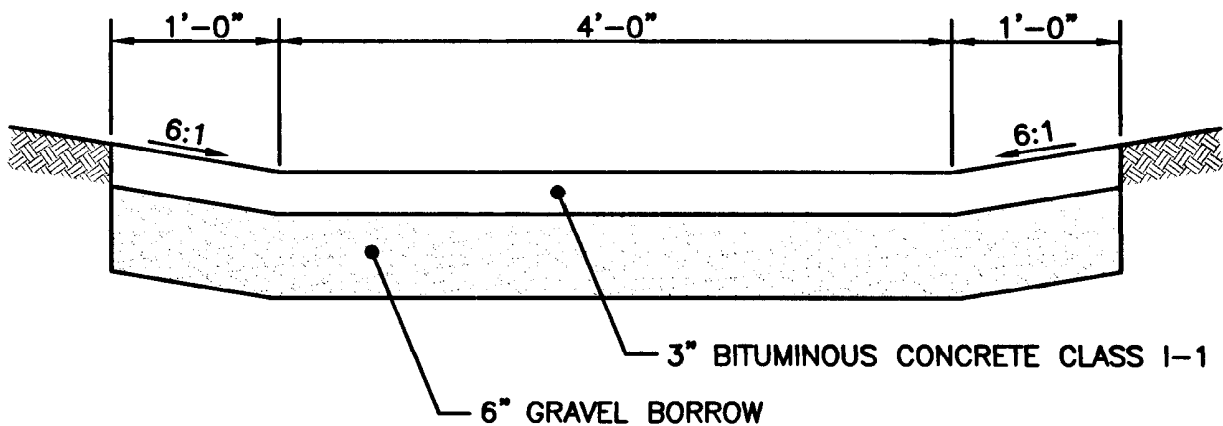
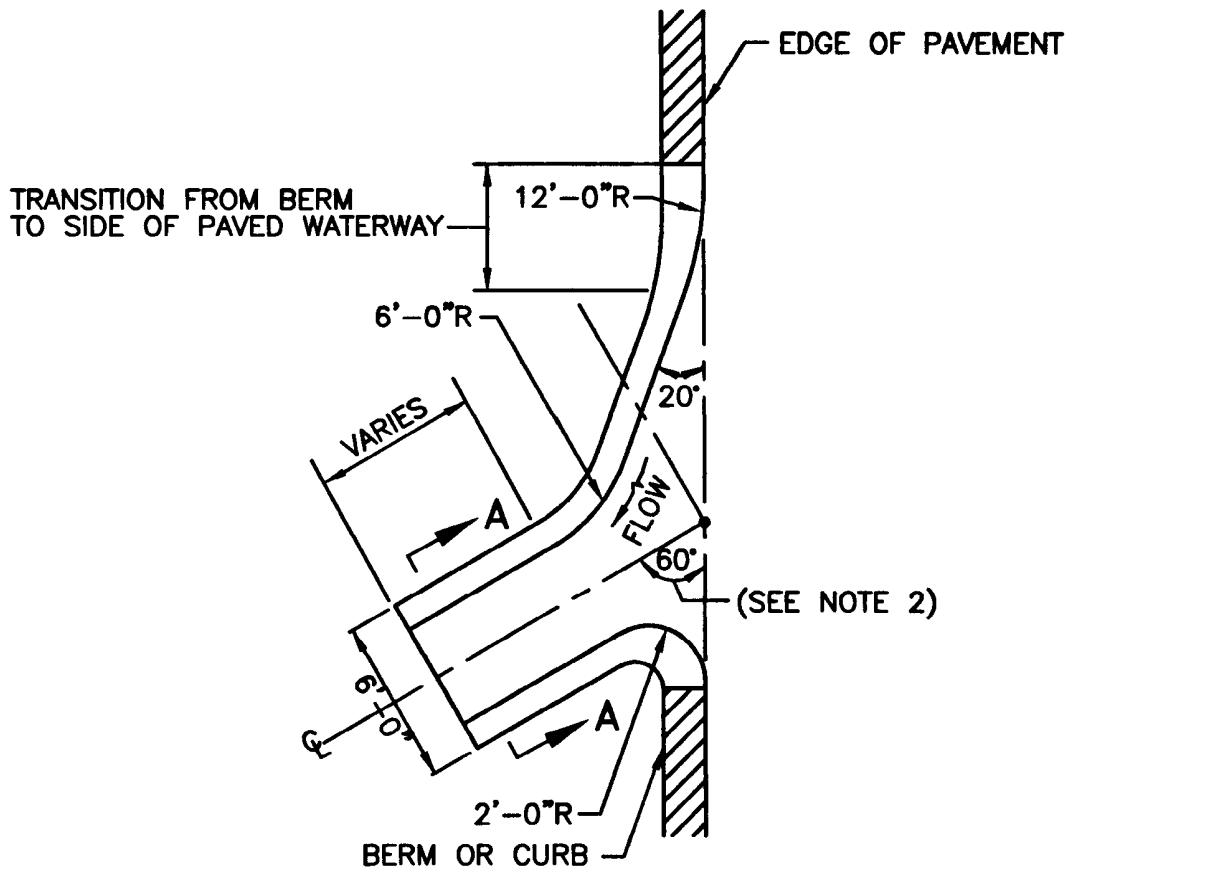
**RIP-RAP DITCH**

*James H. Casabelli*  
 CHIEF ENGINEER  
 TRANSPORTATION

*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

**JUNE 15, 1998**  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN PAVED WATERWAY IS USED AT A LOW POINT THIS ANGLE SHALL BE 90°.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

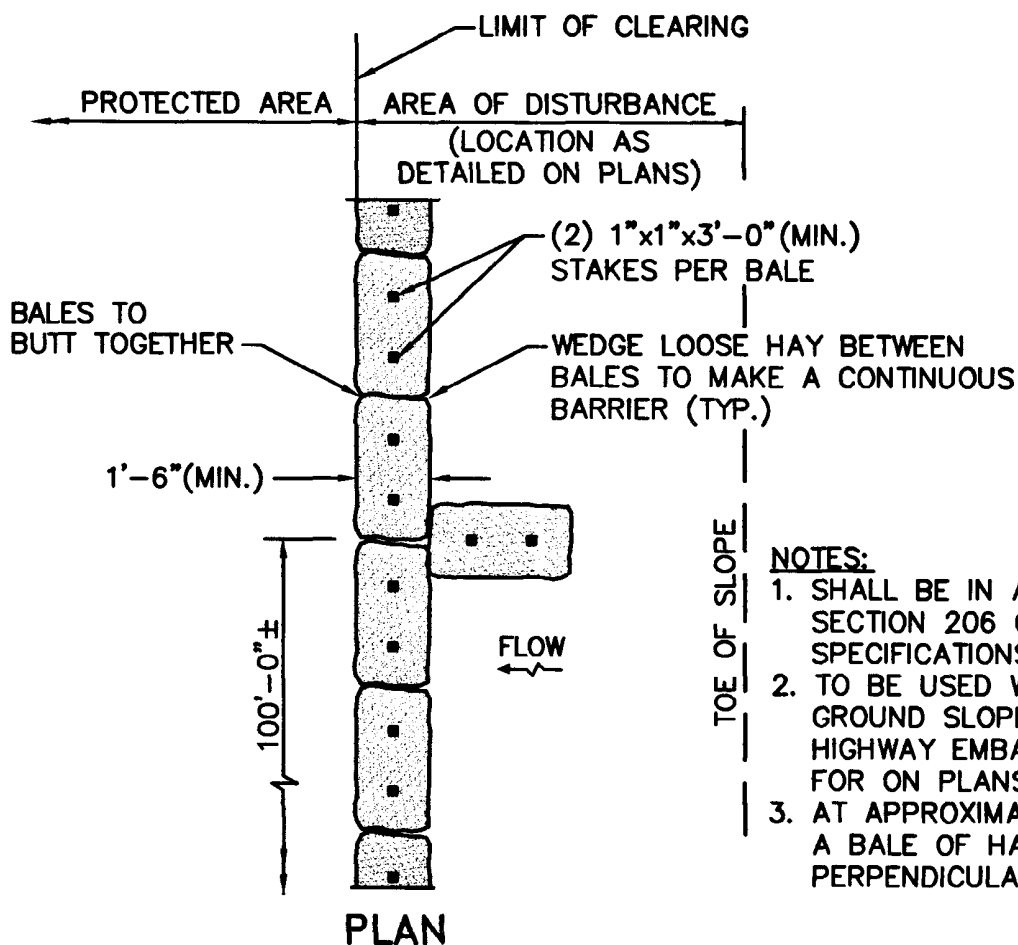
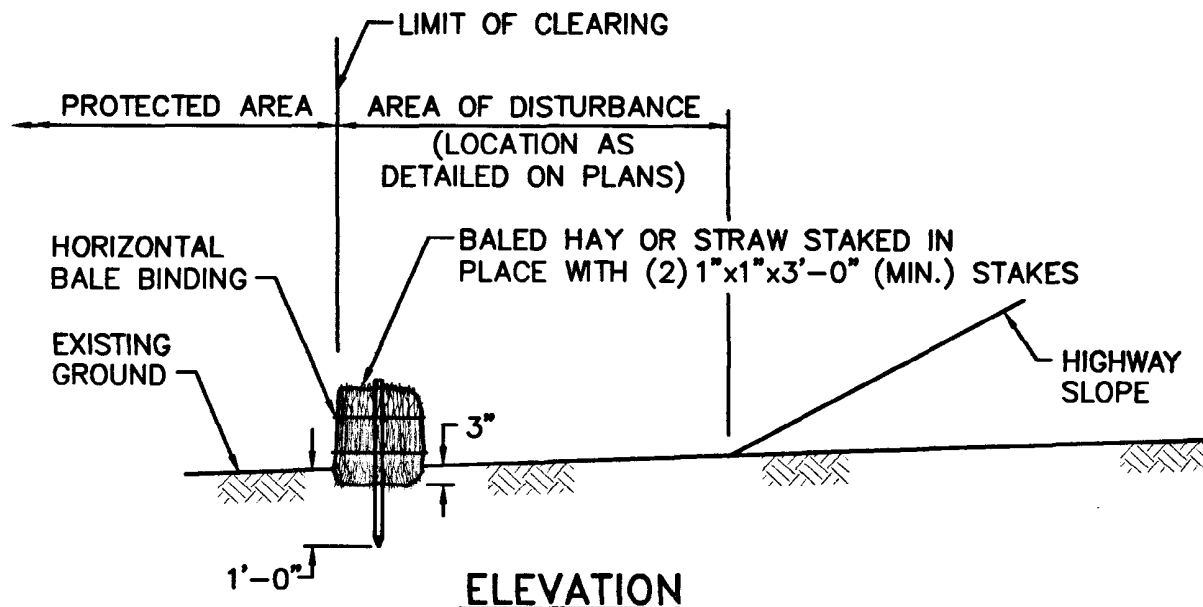
**PAVED WATERWAY**

*James H. Czapli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED WHERE THE EXISTING GROUND SLOPES AWAY FROM THE HIGHWAY EMBANKMENT AS CALLED FOR ON PLANS.
3. AT APPROXIMATE 100'-0" INTERVALS A BALE OF HAY IS TO BUTT PERPENDICULARLY.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

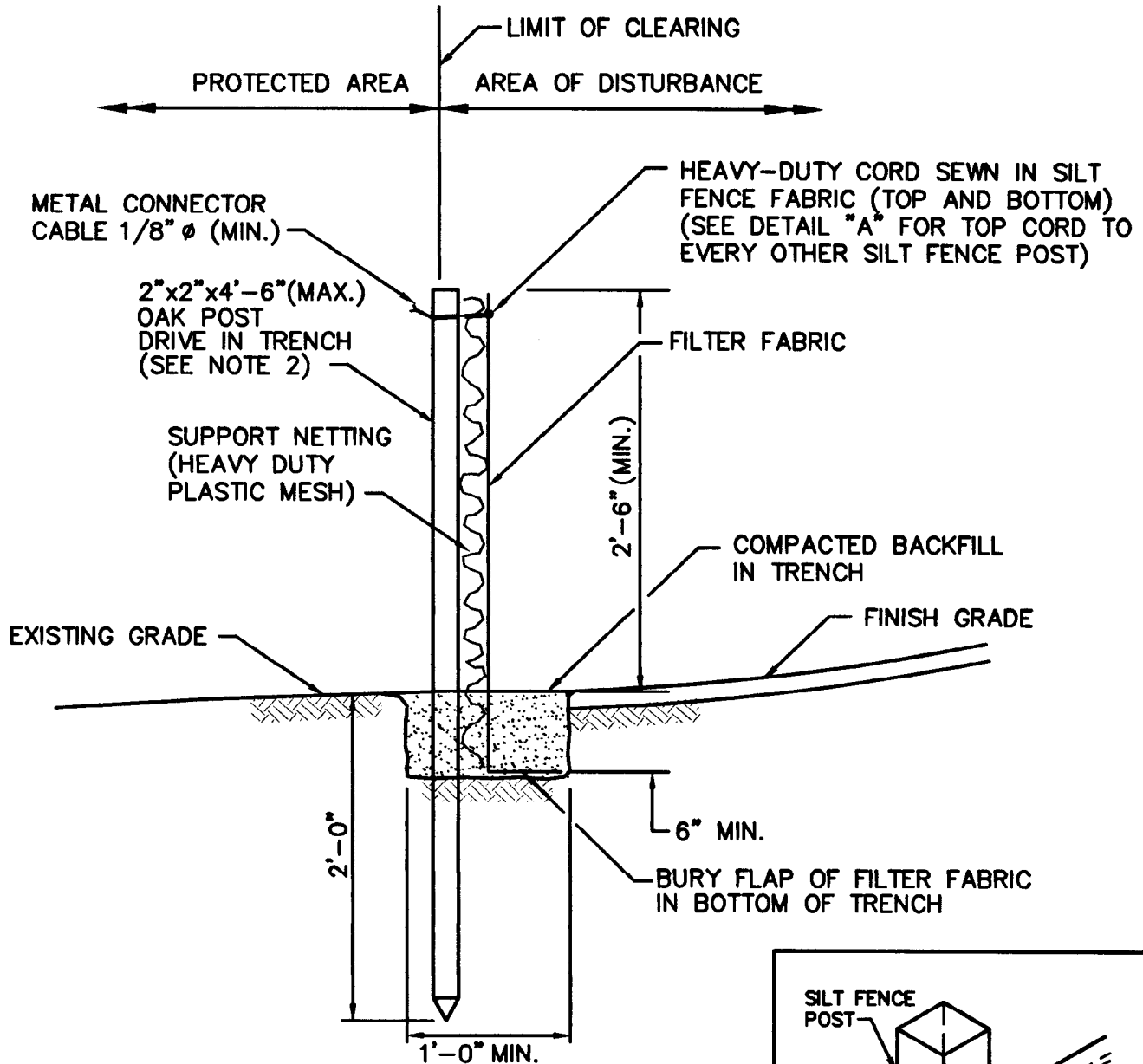
**BALED HAY EROSION CHECK**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

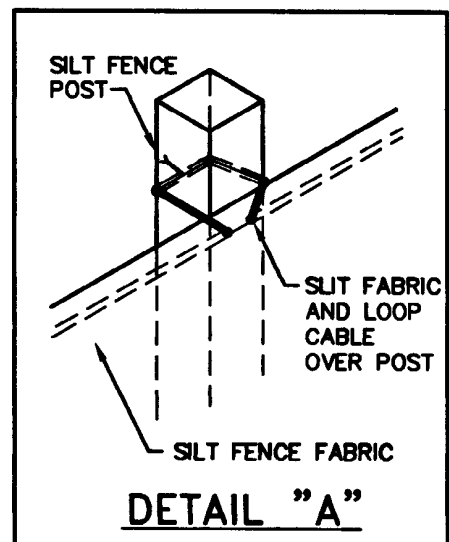
JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2"x2"x4'-6" (MAX.) OAK POSTS FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SILT FENCE DETAIL**

REVISIONS		
NO.	BY	DATE

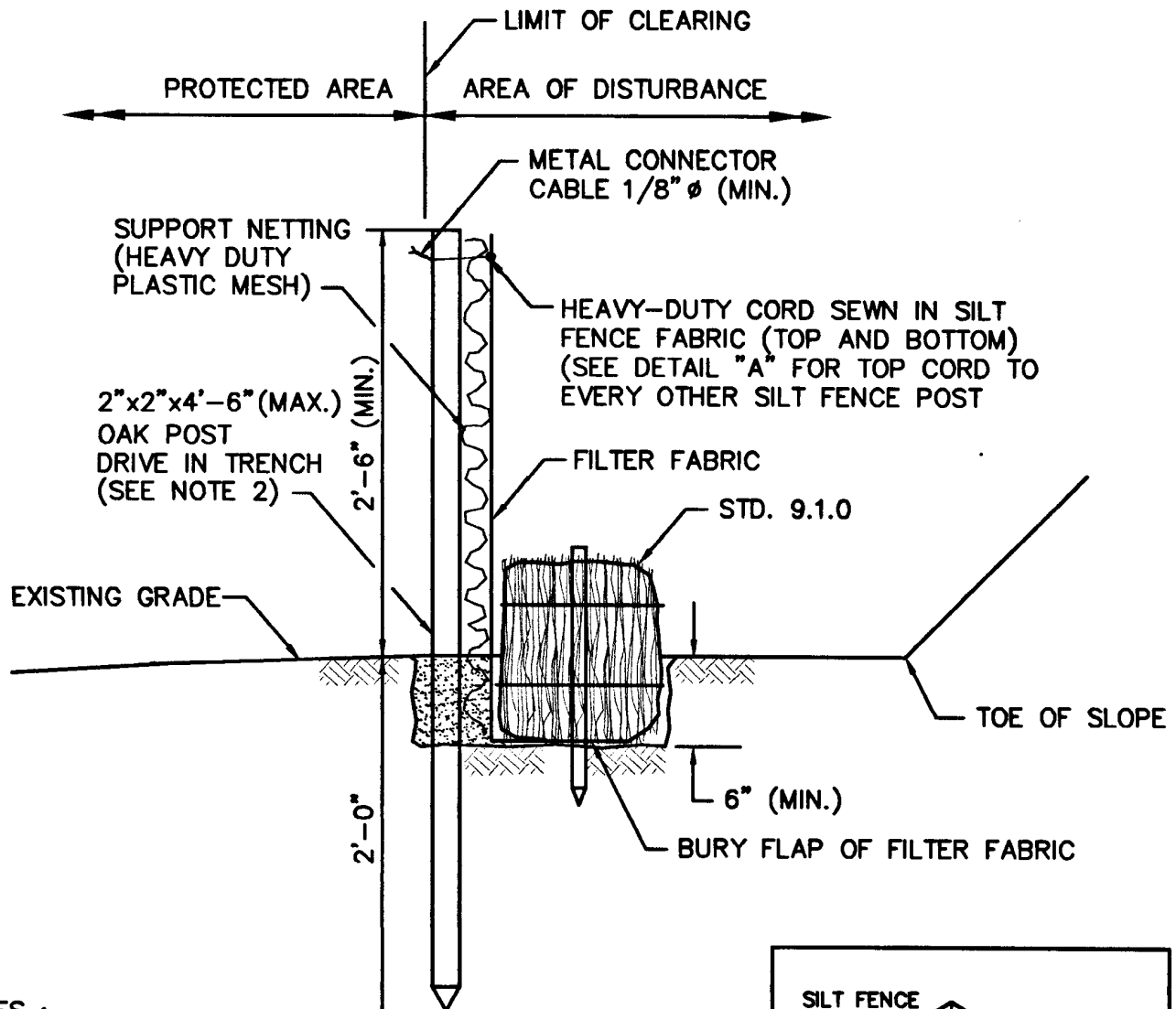
*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

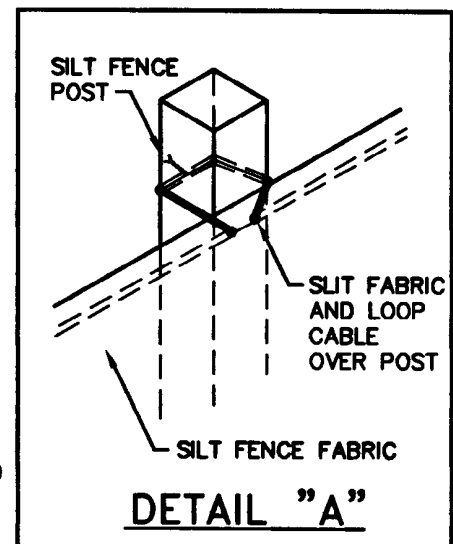






**NOTES :**

1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x2"x4'-6" (MAX.) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX.) O.C. IN WETLAND AREAS AND 4'-0" (MAX.) O.C. IN WETLAND RAVINE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
3. 1"x1"x4'-6" (MIN.) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.



**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**BALED HAY EROSION CHECK  
AND SILT FENCE COMBINED**

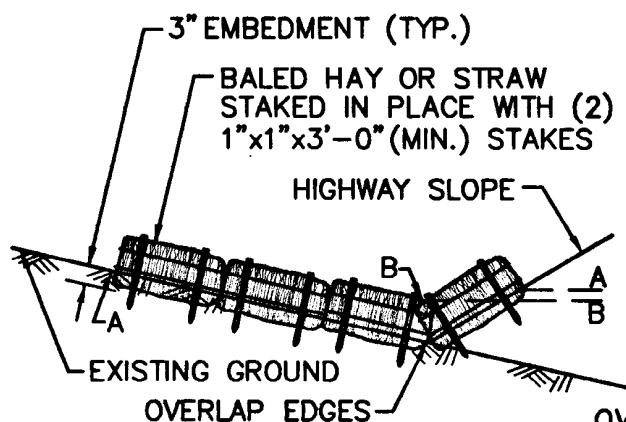
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

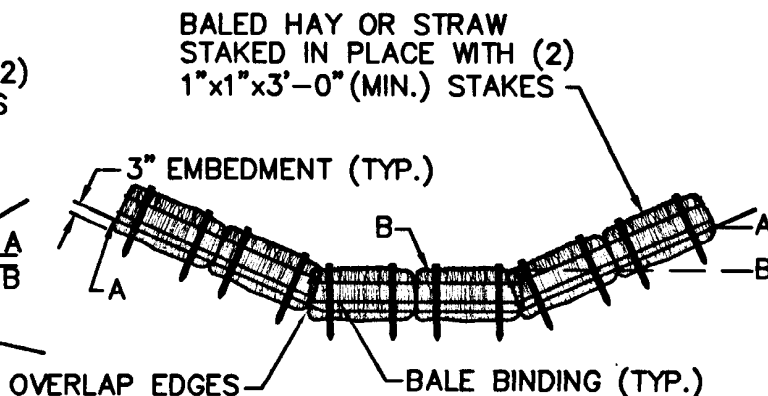
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

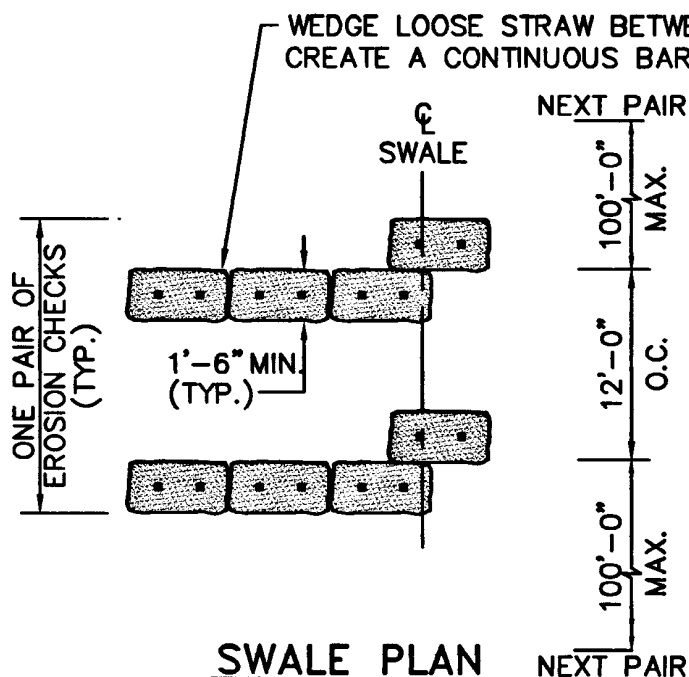




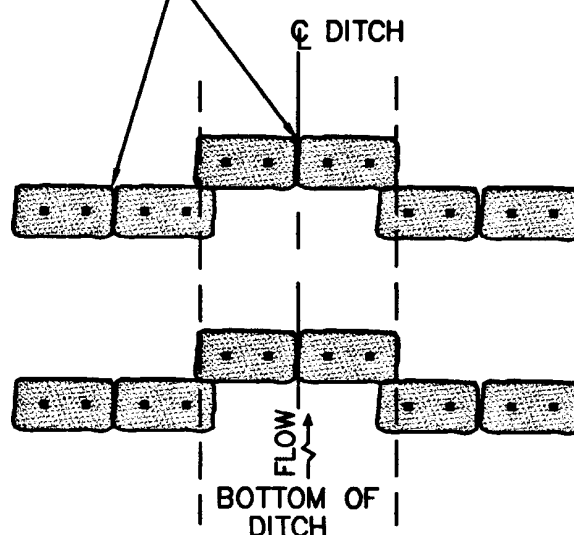
**SWALE ELEVATION**



**DITCH ELEVATION**



**SWALE PLAN**



**DITCH PLAN**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. TO BE USED IN LOCATIONS WHERE THE EXISTING GROUND SLOPES IN TOWARD THE EMBANKMENT OR IN DRAINAGE DITCHES AS CALLED FOR ON THE PLANS.
3. THE BALES ARE TO BE EMBEDDED A MINIMUM OF 3" INTO THE EXISTING GROUND, HIGHWAY SLOPE OR DITCH SECTION.
4. POINTS "A" SHOULD BE AT A HIGHER ELEVATION THAN POINTS "B".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

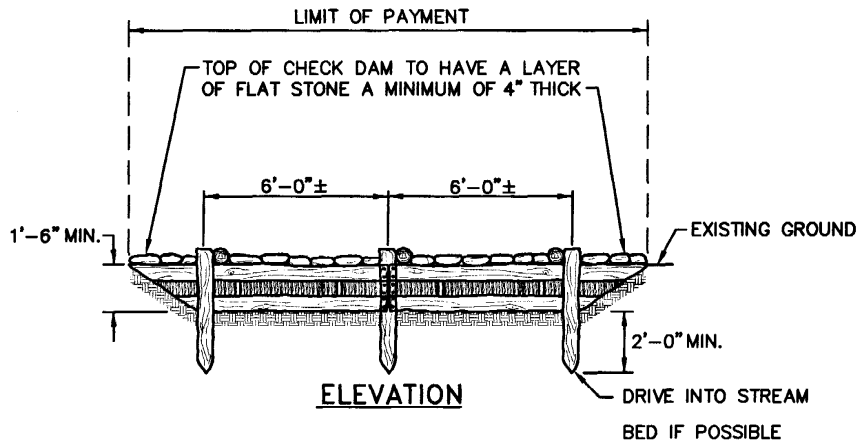
**BALED HAY DITCH AND SWALE EROSION CHECK**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

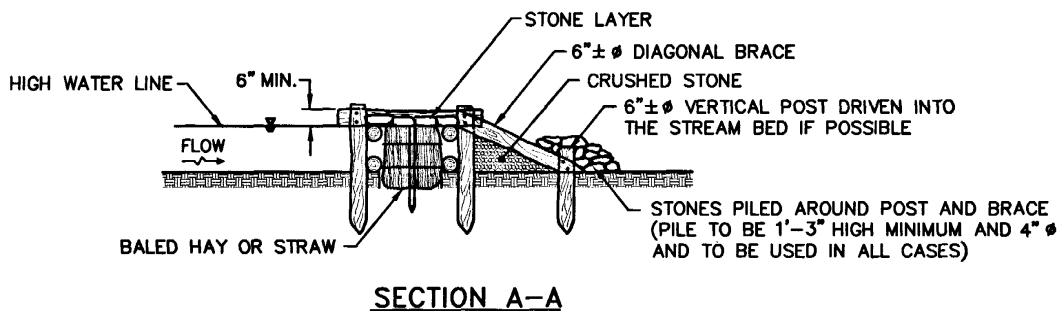
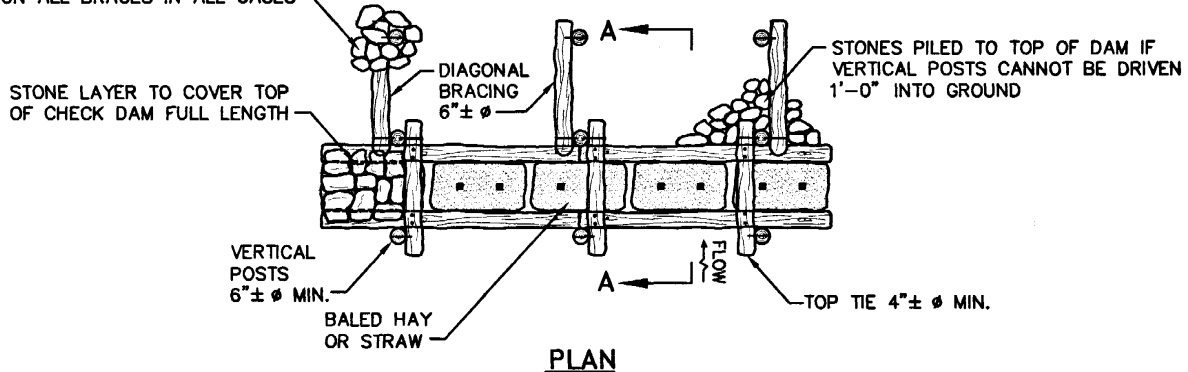
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







PILED STONE TO STABILIZE BRACING  
ON ALL BRACES IN ALL CASES

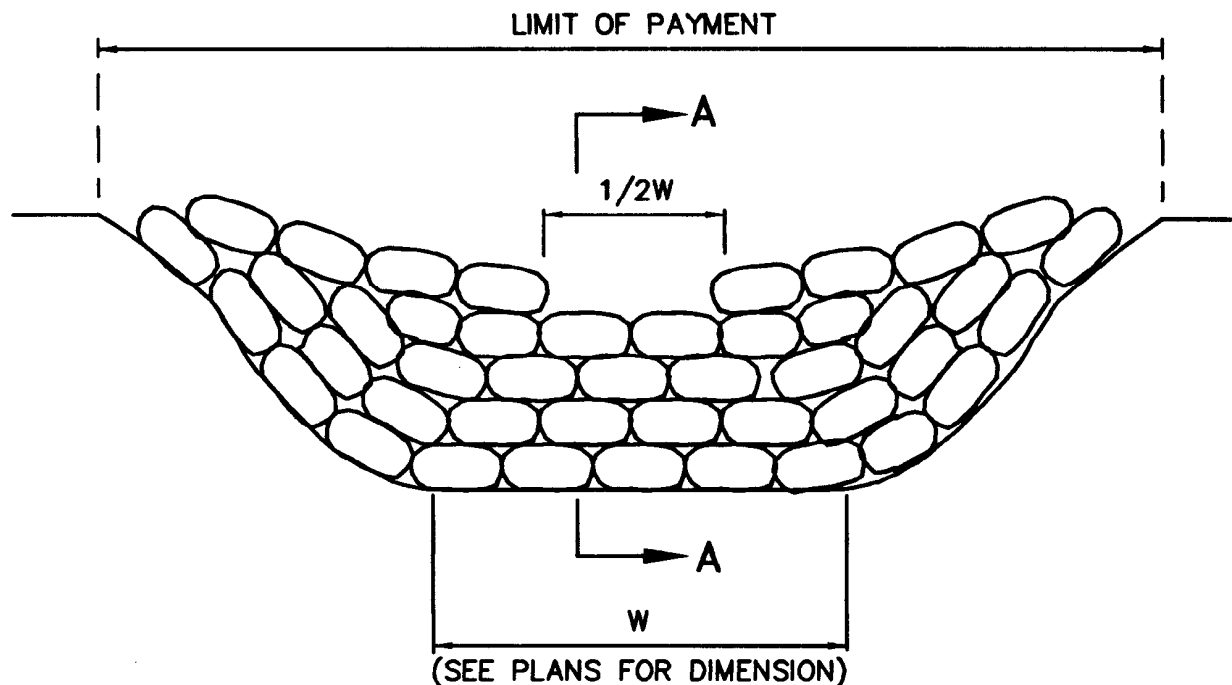


#### NOTES:

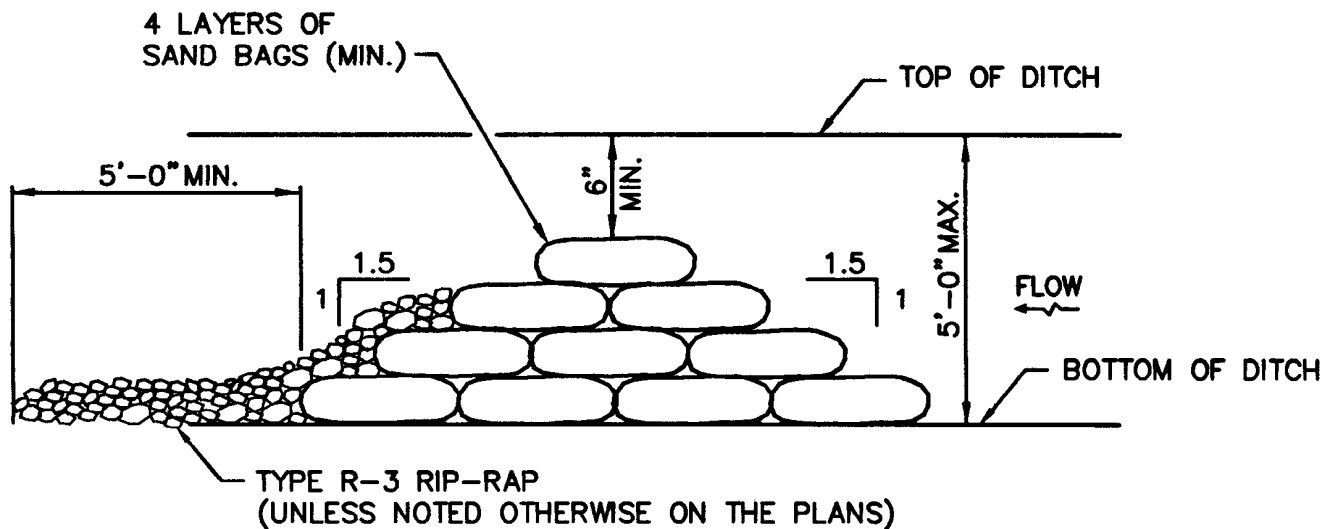
1. SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.
2. DAM TO BE CONSTRUCTED OF NATIVE LOGS OBTAINED FROM CLEARING OPERATION, WHEN AVAILABLE. ALL LOGS TO BE SPIKED WITH WIRE SPIKES OR BOLTED TOGETHER. EXISTING TREES, BOULDERS OR LEDGE MAY BE USED IN PLACE OF THE THE VERTICAL POSTS AT THE DISCRETION OF THE ENGINEER.
3. WHEN VERTICAL POST CANNOT BE DRIVEN INTO THE STREAM BED, STONES SHALL BE USED TO BRACE THE STRUCTURE.
4. BALES OF HAY TO BE EMBEDDED A MINIMUM OF 6" INTO THE EXISTING GROUND. IF THE EXISTING GROUND IS LEDGE, A 2'-0"x2'-0" WEDGE OF CRUSHED STONE IS TO BE PLACED AGAINST THE UPSTREAM FACE OF THE CHECK DAM.
5. HEIGHT OF THE DAM WILL VARY BASED ON HIGH WATER LEVEL.

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			LOG AND HAY CHECK DAM	<div><div>R.I. STANDARD 9.5.0</div></div>
NO.	BY	DATE		
			<div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div>	



### ELEVATION



### SECTION A-A

#### NOTE:

SHALL BE IN ACCORDANCE WITH SECTION 207 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### SAND BAG EROSION CHECK

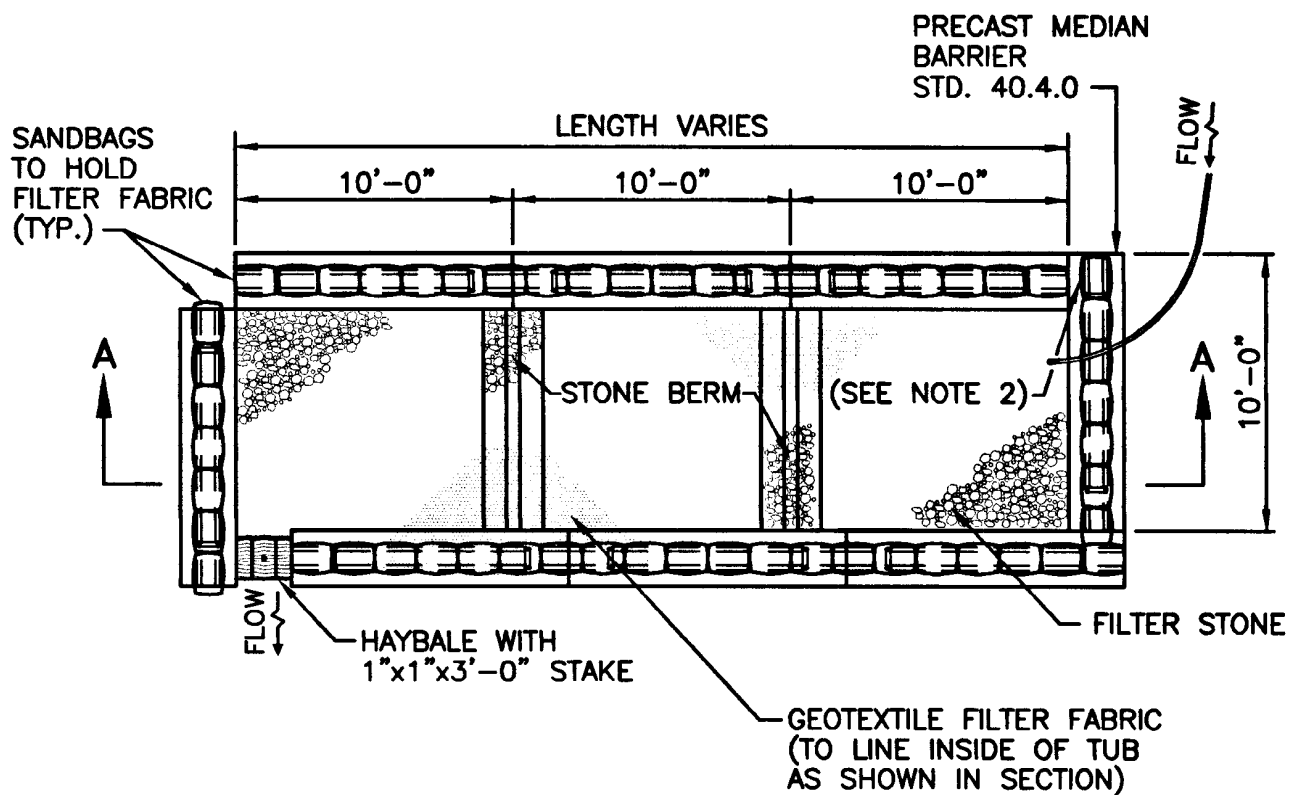
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

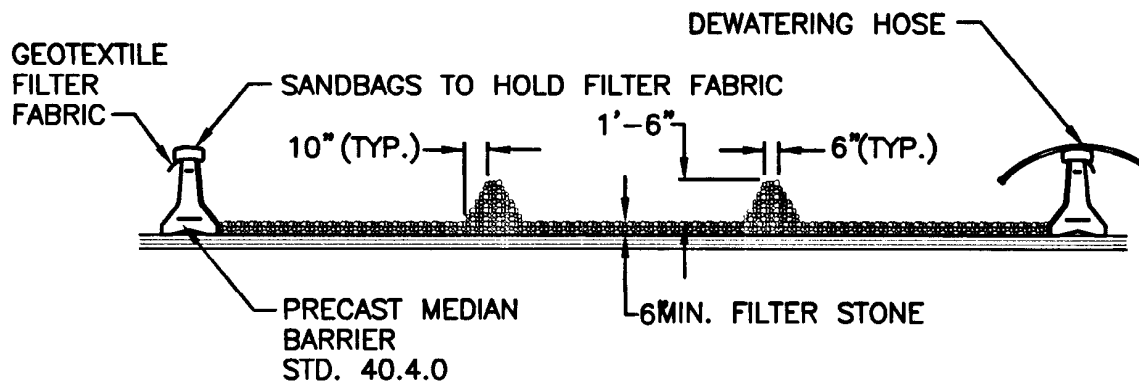
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**PLAN**



**SECTION**

**NOTS:**

1. SHALL BE IN ACCORDANCE WITH SECTION 208 OF THE R.I. STANDARD SPECIFICATIONS.
2. PROVIDE ADDITIONAL SAND BAGS AS REQUIRED TO FILL SPACE BETWEEN ADJACENT BARRIERS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

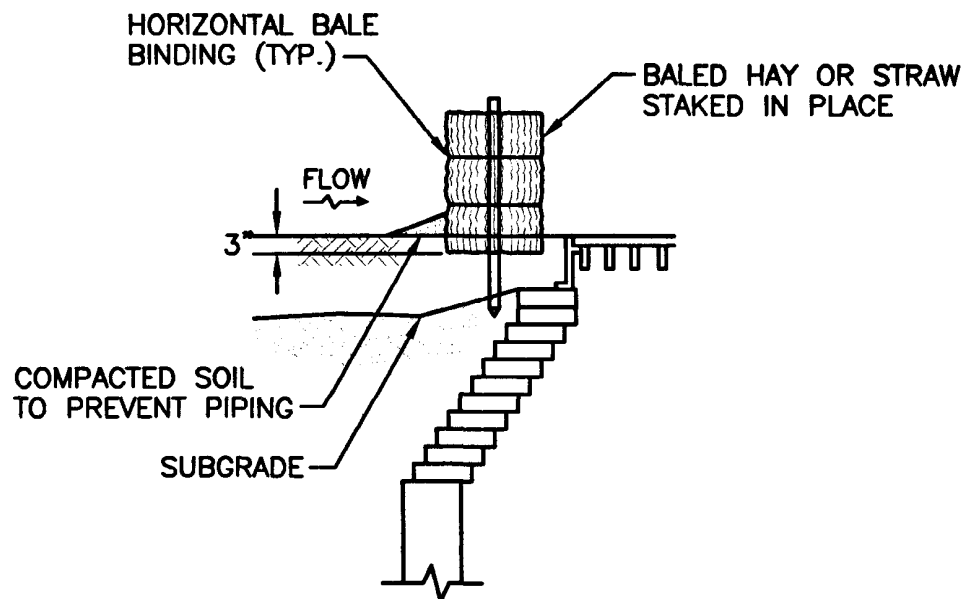
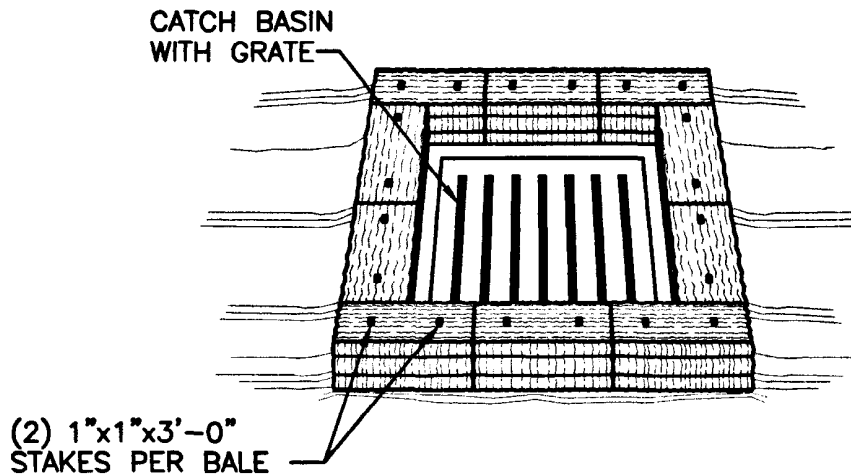
**DEWATERING BASIN**

*John A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 209 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS INLET PROTECTION CAN ALSO BE USED WHEN CONSTRUCTION SEQUENCING REQUIRES A CATCH BASIN TO BE EXPOSED TO SEDIMENT FROM THE SUBGRADE. THIS WILL BE ACHIEVED BY INSTALLING THE BALED HAY AS SHOWN ON THIS DETAIL INTO THE SUBGRADE.
3. THE PERIMETER CONFIGURATION OF THE BALED HAY WILL VARY DEPENDING ON THE PARTICULAR TYPE OF CATCH BASIN INLET BEING CONSTRUCTED. THE ENGINEER WILL PROVIDE SPECIFIC DIRECTION IN SUCH CASES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

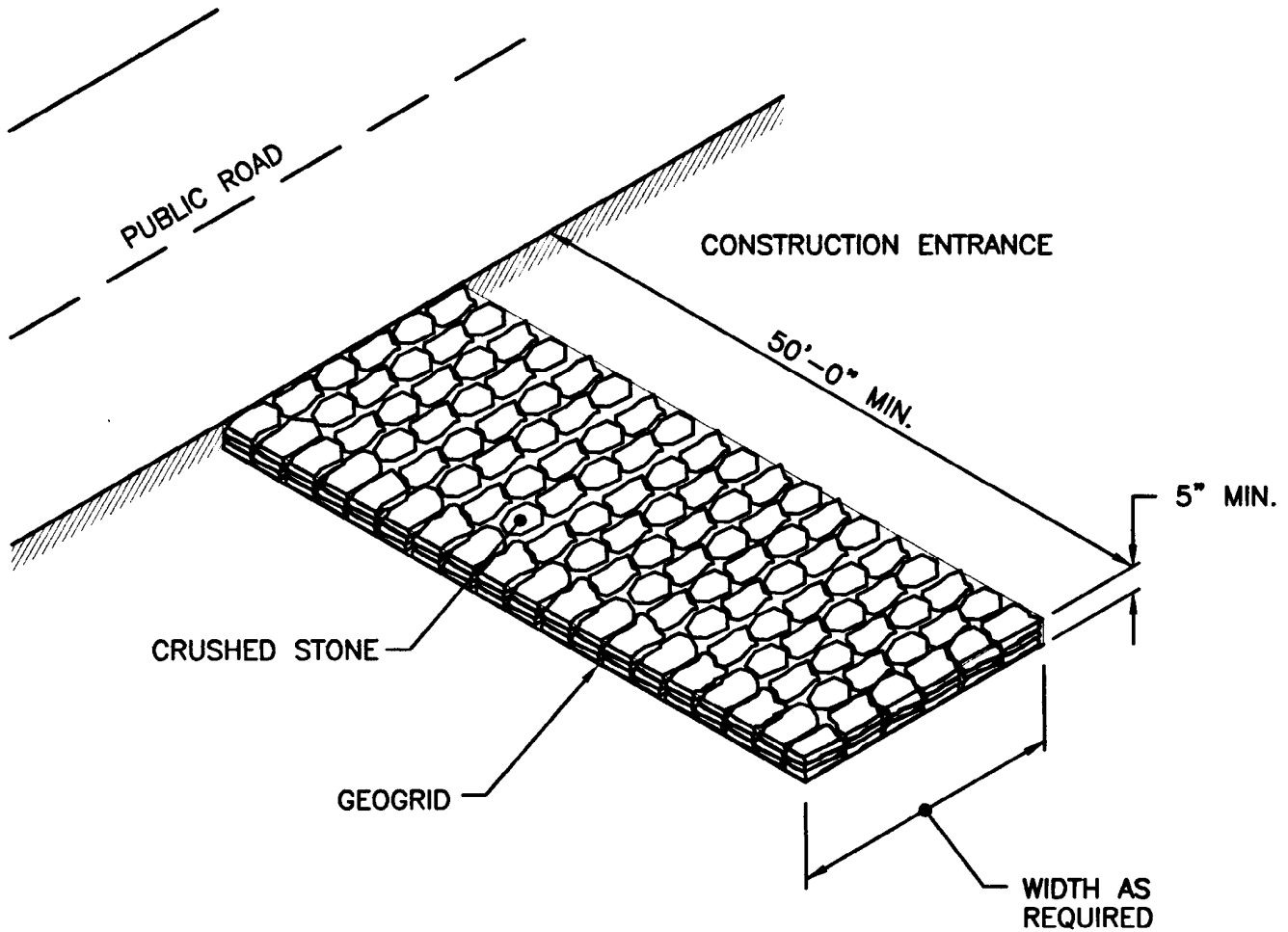
**BALED HAY CATCH BASIN  
INLET PROTECTION**

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

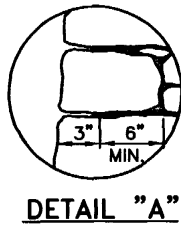
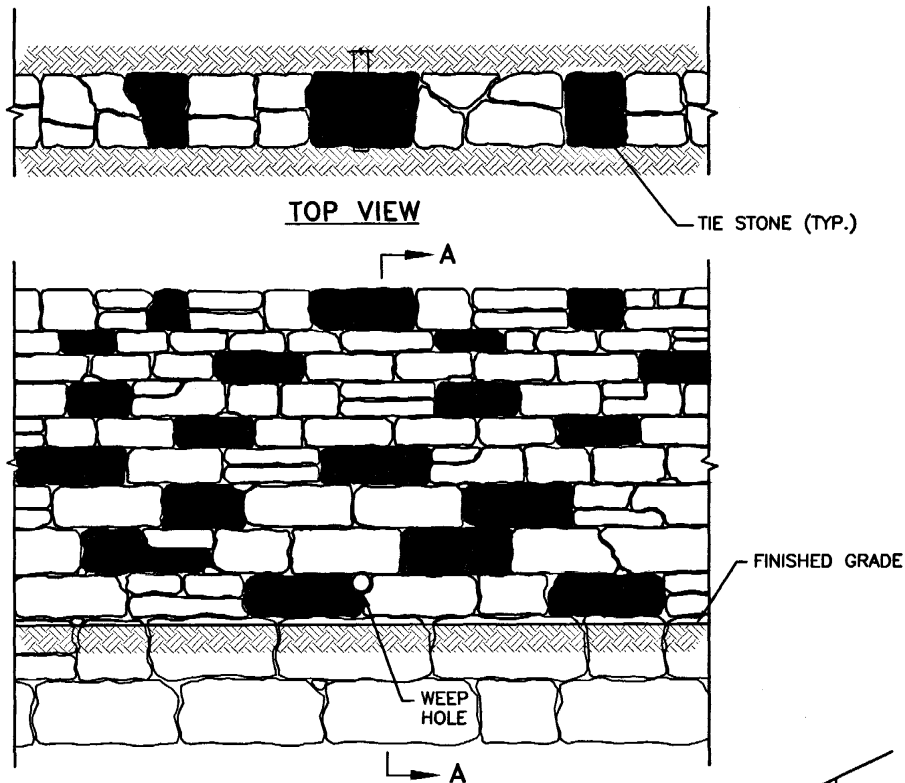
### CONSTRUCTION ACCESS

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

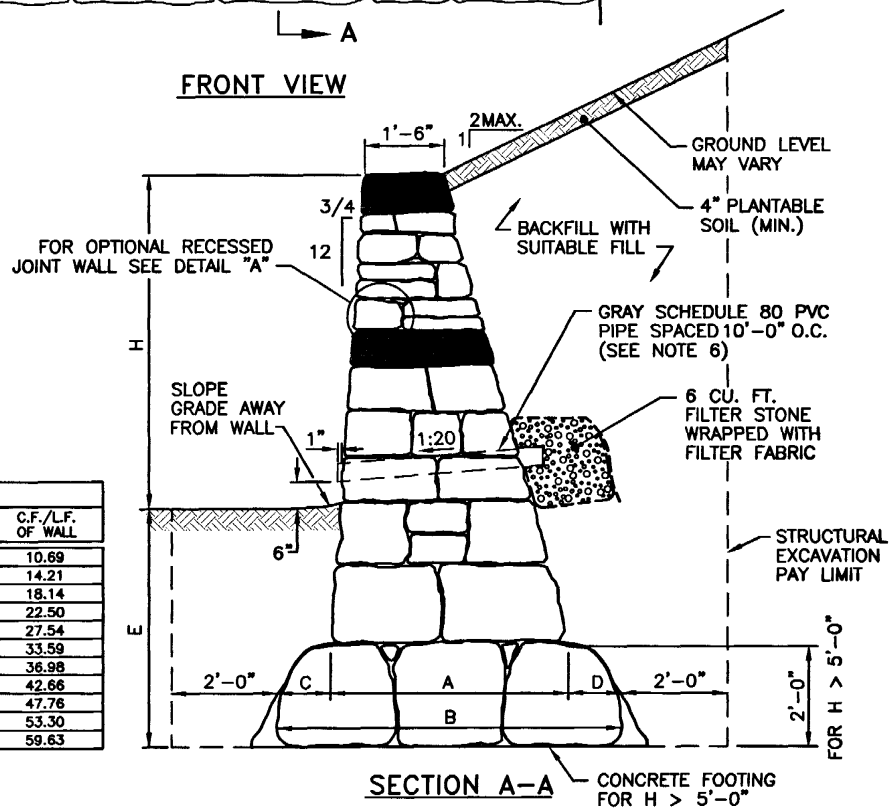
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





DIMENSIONS AND QUANTITIES						
H	A	B	C	D	E	C.F./L.F. OF WALL
2'-0"	3'-3"	-	-	-	2'-6"	10.69
3'-0"	3'-6"	-	-	-	2'-6"	14.21
4'-0"	4'-1"	-	-	-	2'-6"	18.14
5'-0"	4'-6"	-	-	-	2'-6"	22.50
6'-0"	-	5'-4"	1'-0"	1'-4"	3'-6"	27.54
7'-0"	-	6'-2"	1'-4"	1'-4"	3'-6"	33.59
8'-0"	-	6'-5"	1'-4"	1'-6"	3'-6"	36.98
9'-0"	-	7'-4"	1'-9"	1'-9"	3'-6"	42.66
10'-0"	-	7'-10"	1'-9"	2'-0"	3'-6"	47.76
11'-0"	-	8'-5"	1'-10"	2'-3"	3'-6"	53.30
12'-0"	-	9'-0"	1'-10"	2'-6"	3'-6"	59.63



NOTES:

1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 911 OF THE R.I. STANDARD SPECIFICATIONS.
2. JOINTS SHALL NOT EXCEED 1" IN WIDTH.
3. JOINTS ON THE FACE OF WALL SHALL BE POINTED TO THE FACE LINE OF THE WALL UNLESS RECESSED JOINTS ARE CALLED FOR ABOVE GRADE.
4. POINTING OF JOINTS ON TOP OF WALL SHALL BE FLUSH AND PITCHED TO DEFLECT WATER OFF OF THE WALL.
5. DRESS 6" BELOW GRADE FOR FRONT FACE OF WALL.
6. WEEP HOLES SHALL BE CONSTRUCTED OF 3" GRAY SCHEDULE 80 PVC PIPE WHEN H ≤ 5'-0" AND 4" GRAY SCHEDULE 80 PIPE WHEN H > 5'-0". ALL PIPE IS TO BE SOLID.
7. TIE STONES SHALL BE PLACED A MAXIMUM OF 4'-0" O.C.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

WET STONE MASONRY RETAINING WALL

REVISIONS		
NO.	BY	DATE

*James H. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

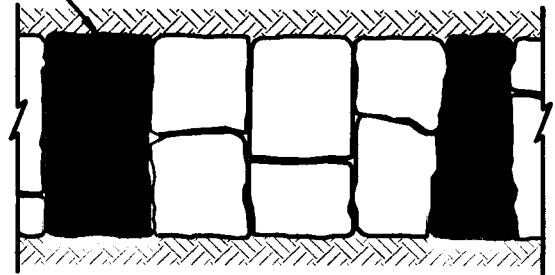
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

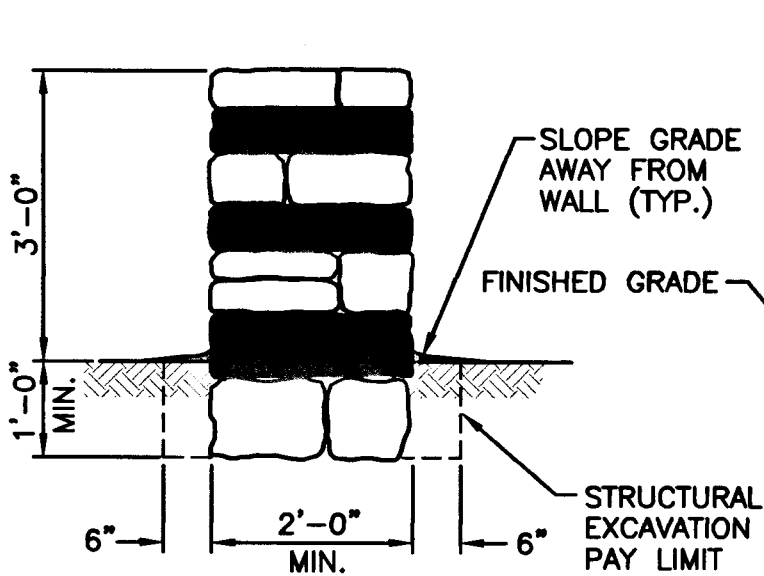




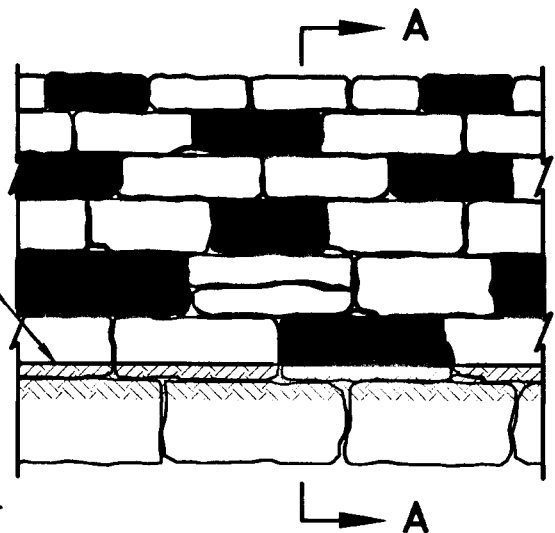
TIE STONE (TYP.)



PLAN



SECTION A-A



ELEVATION

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 912 OF THE R.I. STANDARD SPECIFICATIONS.
2. TIE STONES SHALL BE PLACED A MAXIMUM OF 4'-0" O.C.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**RUBBLE MASONRY WALL**

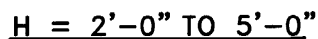
REVISIONS		
NO.	BY	DATE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

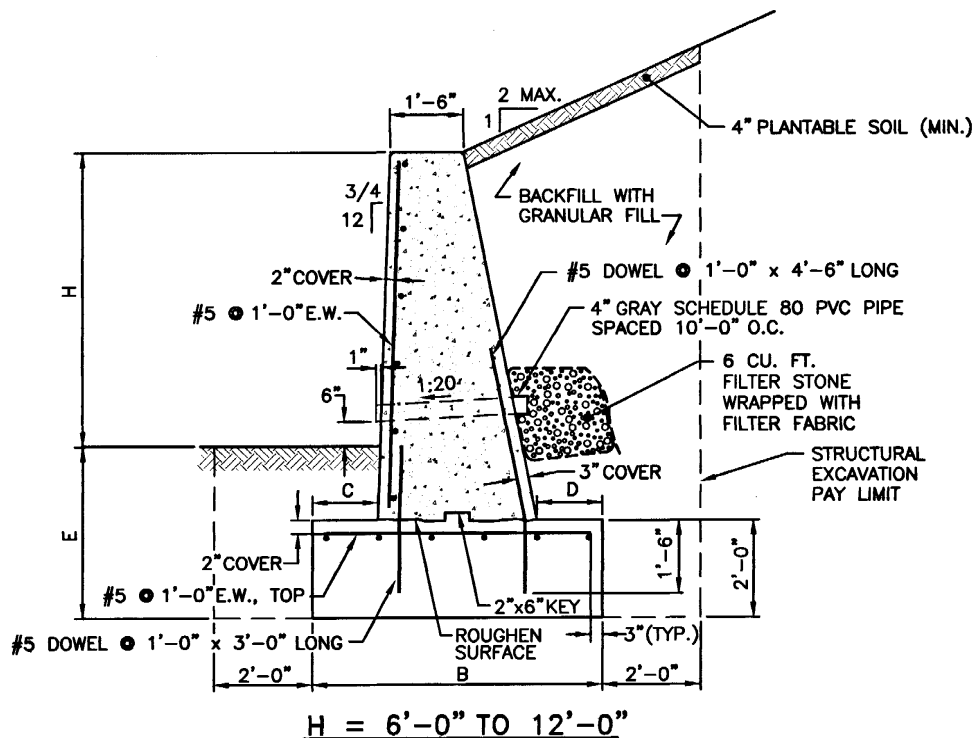
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





DIMENSIONS AND QUANTITIES						
H	A	B	C	D	E	C.F./L.F. OF WALL
2'-0"	3'-3"	—	—	—	2'-6"	10.69
3'-0"	3'-8"	—	—	—	2'-6"	14.21
4'-0"	4'-1"	—	—	—	2'-6"	18.14
5'-0"	4'-6"	—	—	—	2'-6"	22.50
6'-0"	—	5'-4"	1'-0"	1'-4"	3'-6"	27.54
7'-0"	—	6'-2"	1'-4"	1'-4"	3'-6"	33.59
8'-0"	—	6'-5"	1'-4"	1'-6"	3'-6"	36.98
9'-0"	—	7'-4"	1'-9"	1'-9"	3'-6"	42.66
10'-0"	—	7'-10"	1'-9"	2'-0"	3'-6"	47.76
11'-0"	—	8'-5"	1'-10"	2'-3"	3'-6"	53.30
12'-0"	—	9'-0"	1'-10"	2'-6"	3'-6"	59.63



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 808 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE 1/2" PREFORMED JOINT FILLER AND BEVEL EXPOSED EDGES WITH 3/4" CHAMFER.
3. SEAL BACKFACE WITH 1/4"x1/2" JOINT SEALANT.
4. SURFACE RUB EXPOSED FACE AND TOP.
5. ALL REINFORCING TO BE EPOXY COATED.
6. PROVIDE EXPANSION JOINTS EVERY 25'-0" IN STEMS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

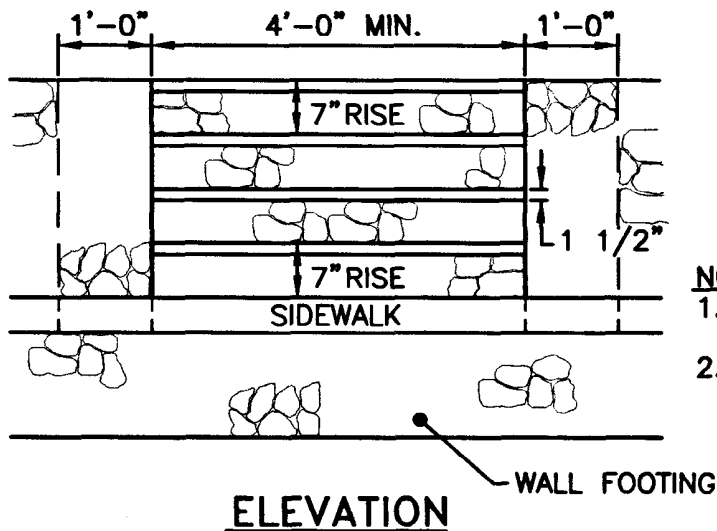
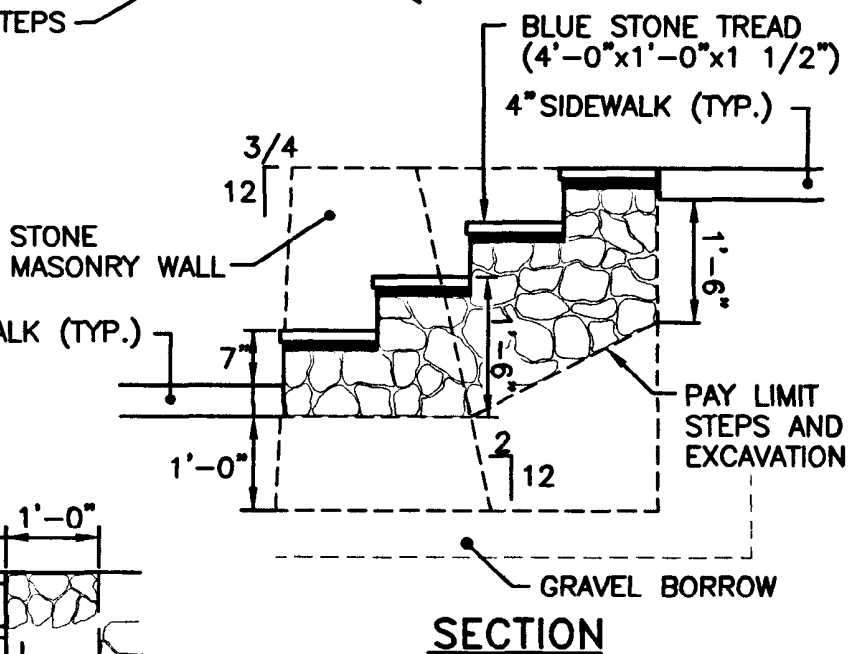
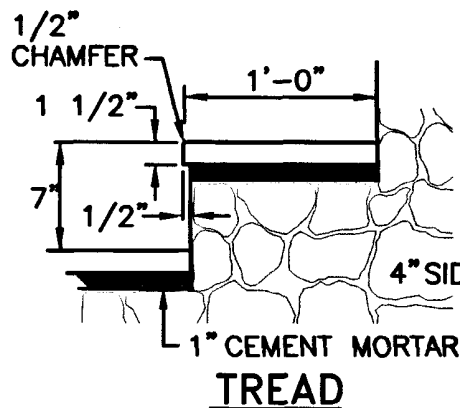
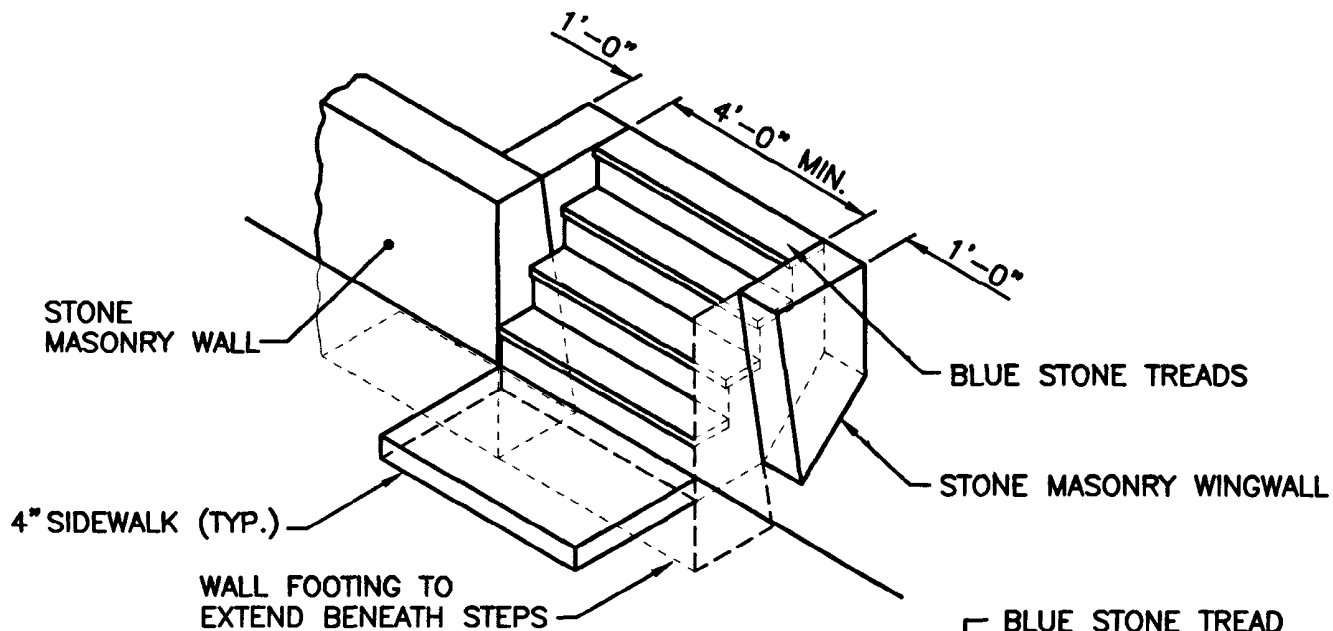
## CONCRETE RETAINING WALL

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE

**R.I.  
STANDARD  
10.3.0**



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 911 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL EXPOSED TOP EDGES OF TREADS TO HAVE 1/2" CHAMFER (SAW OR TOOLED).

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STONE MASONRY STEPS**

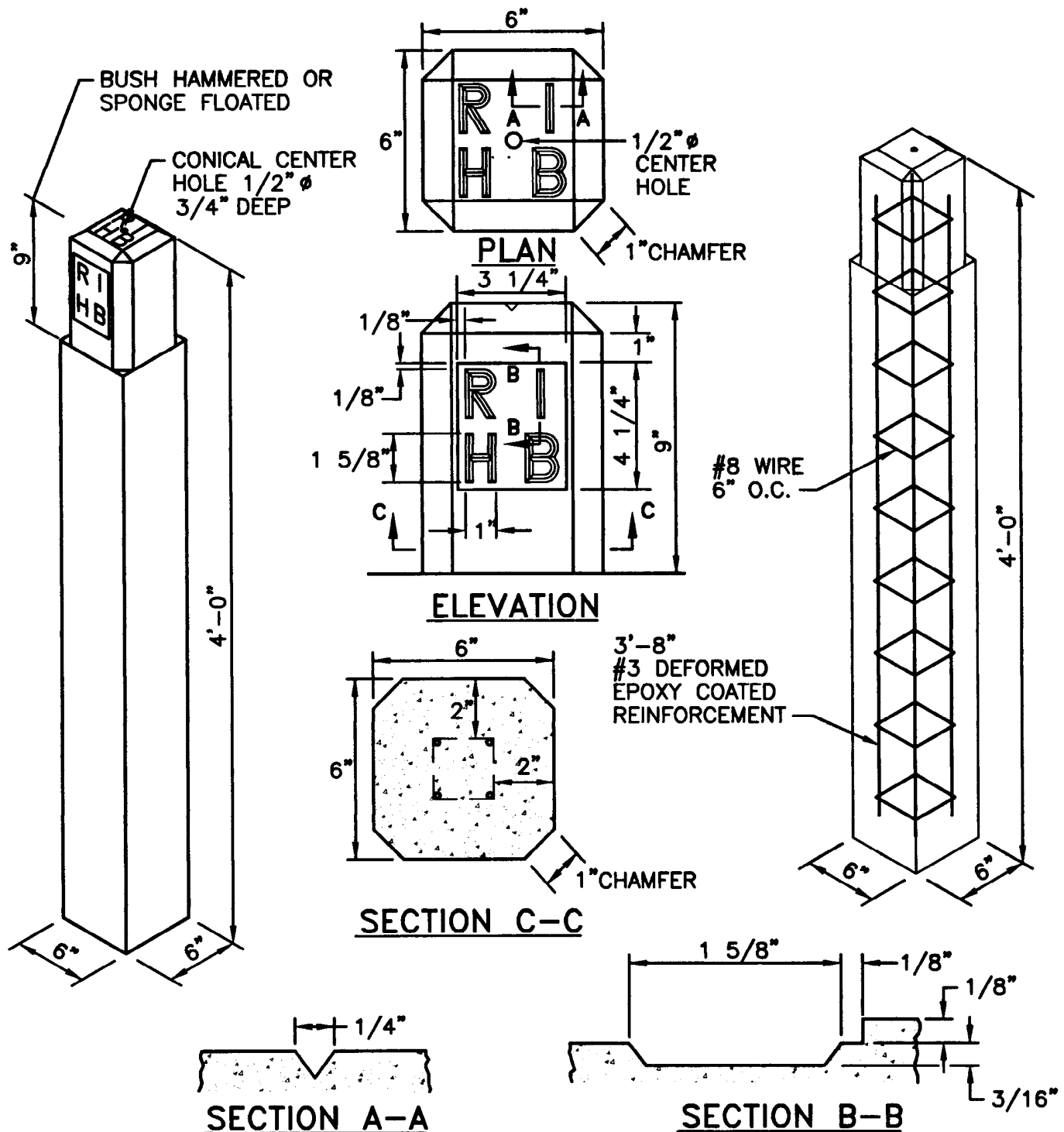
REVISIONS		
NO.	BY	DATE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. #3 DEFORMED EPOXY COATED REINFORCEMENT TO CLEAR TOP AND BOTTOM BY 2".
3. #8 EPOXY COATED WIRE TO CLEAR TOP AND BOTTOM BY 3".
4. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CONCRETE HIGHWAY BOUND**

**REVISIONS**

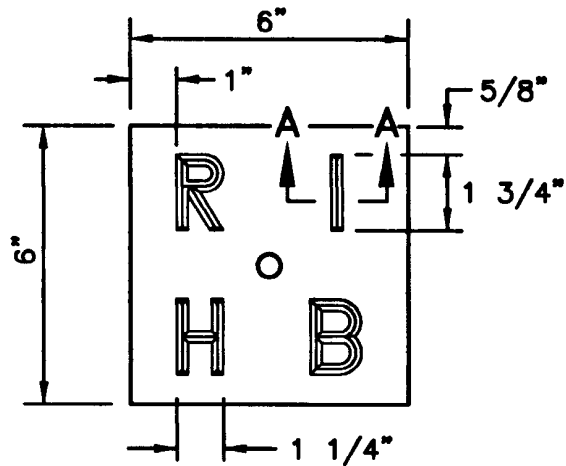
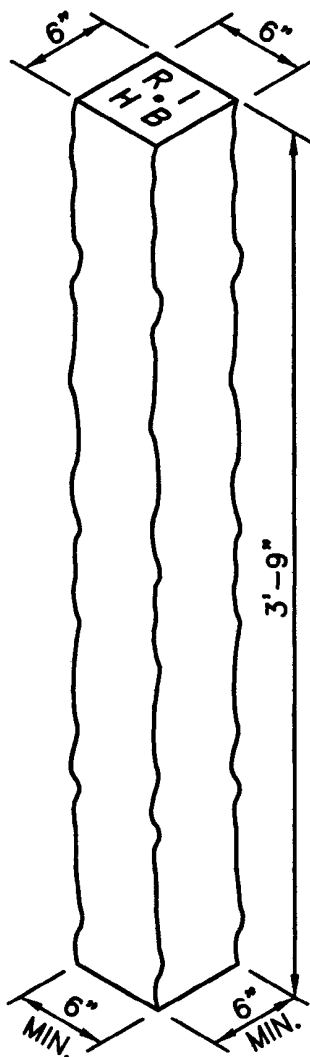
NO.	BY	DATE

*James H. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

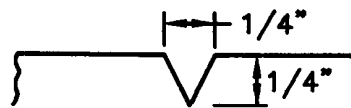
*Edmund Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE

R.I.  
 STANDARD  
 14.1.0



PLAN



SECTION A-A

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. BOUND TO BE QUARRY SPLIT FROM FINE GRAIN GRANITE FREE FROM NATURAL FRACTURES, SEAMS, LAMINATIONS, CRACKS OR IMPURITIES.
3. TOP SURFACE OF BOUND TO BE DRESSED OR SAWED.
4. CONICAL DRILL HOLE IN CENTER OF TOP TO BE 1/4"  $\phi$  AND 3/4" DEEP.
5. BOTTOM TO BE AT LEAST 6" SQUARE AND FLAT.
6. LETTERS "RIHB" ON TOP TO BE OF DIMENSIONS AS SHOWN.
7. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

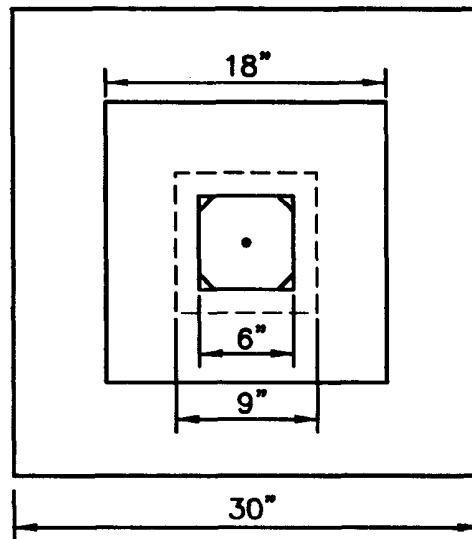
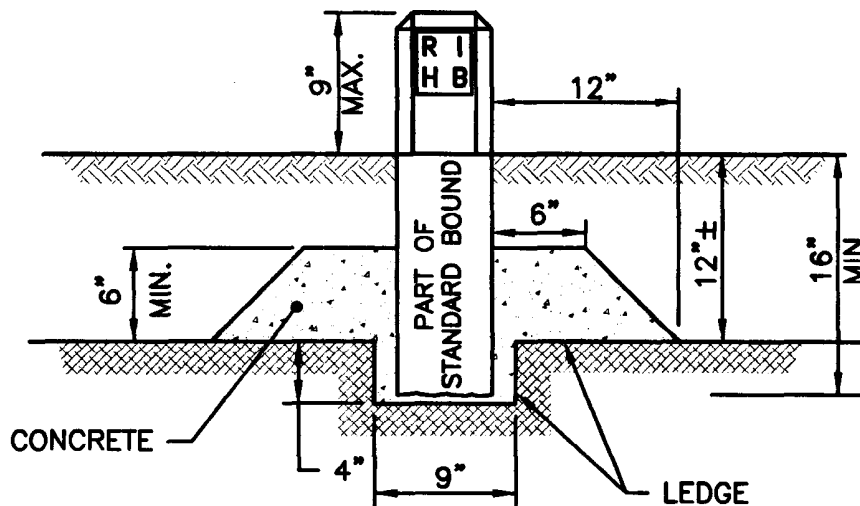
**GRANITE HIGHWAY BOUND**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE STD. 14.1.0 OR STD. 14.2.0 FOR DETAILS OF BOUND.
3. 9" SQUARE HOLE, 4" DEEP TO BE CHIPPED IN LEDGE.
4. BOUNDS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**HIGHWAY BOUND  
SET IN CONCEALED LEDGE**

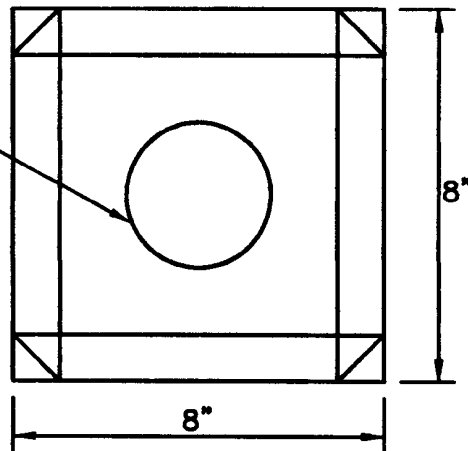
*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



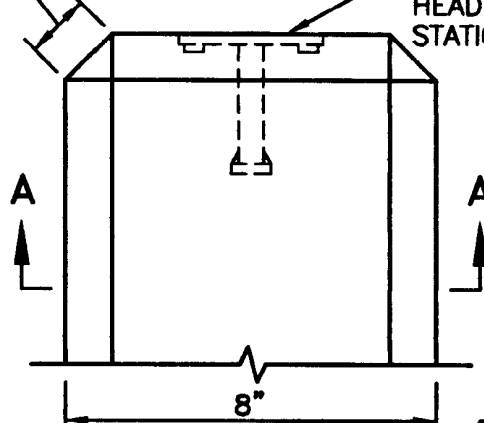
STANDARD BENCH MARK  
OR TRIANGULATION STATION



**PLAN**

STANDARD BENCH MARK  
HEAD OR TRIANGULATION  
STATION

1" CHAMFER



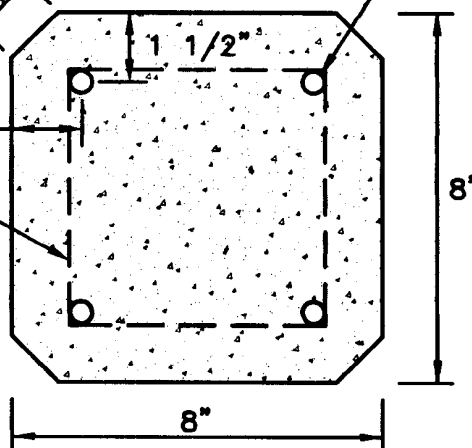
**ELEVATION**

1" CHAMFER

#3 DEFORMED  
EPOXY COATED  
REINFORCEMENT  
4'-9" LONG, SET  
TO CLEAR TOP AND  
BOTTOM OF BOUND  
BY 1 1/2"

1 1/2"

#8 WIRE



**SECTION A-A**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. MONUMENTS TO BE SET 6" ABOVE FINISHED GRADE, EXCEPT IN SIDEWALKS, LAWNS AND DRIVEWAYS WHERE THEY SHALL BE SET FLUSH WITH FINISHED GRADE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**REINFORCED CONCRETE  
PRECISE LEVEL MONUMENT**

**REVISIONS**

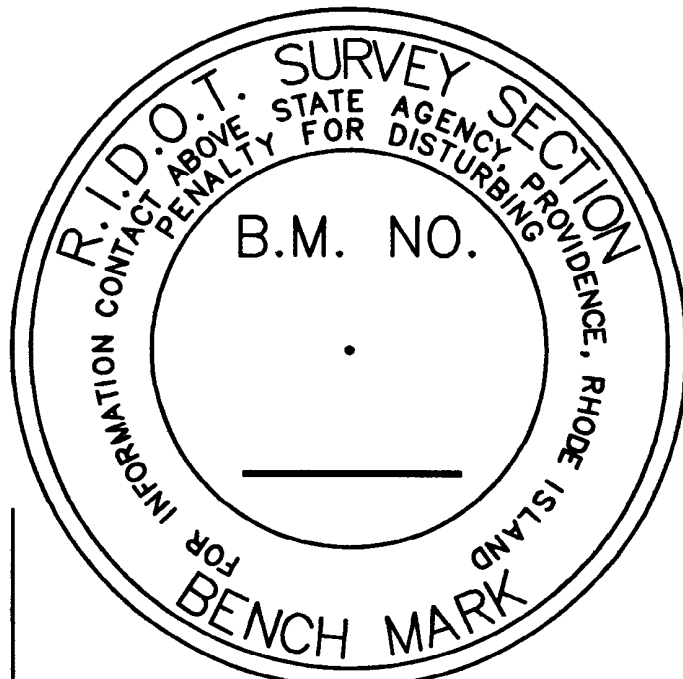
NO.	BY	DATE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

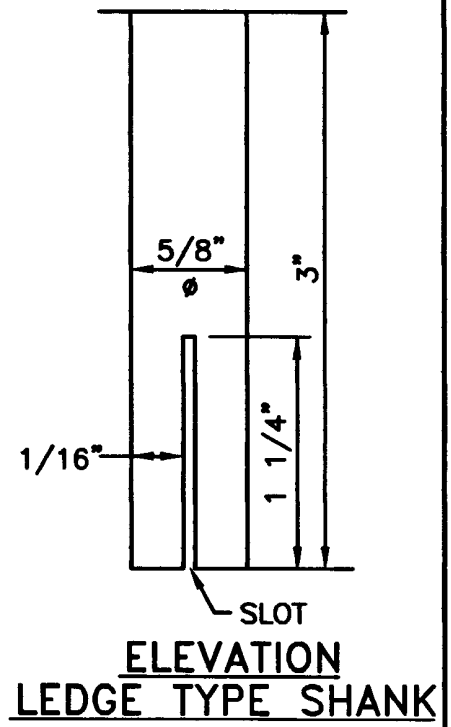
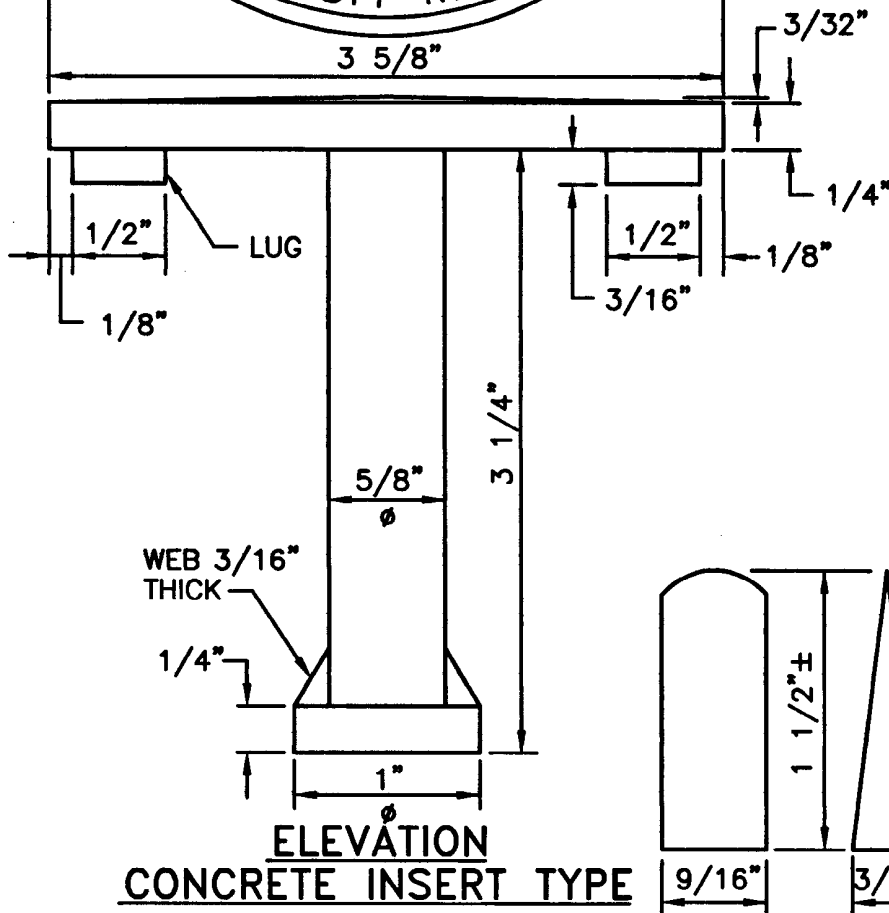
JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
14.4.0



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 915 OF THE R.I. STANDARD SPECIFICATIONS.
2. OUTER LETTERS: 1/4" HIGH  
3/64" STROKE  
1/32" INSET
3. MIDDLE LETTERS: 1/4" HIGH  
1/32" STROKE  
1/64" INSET
4. INNER LETTERS: 3/32" HIGH  
1/32" STROKE  
1/64" INSET
5. CIRCLES: 1/32" STROKE  
1/64" INSET  
CENTER PUNCHMARK- 1/32" INSET



**STEEL WEDGE FOR LEDGE SHANK**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STANDARD BENCH MARK HEADS**

REVISIONS		
NO.	BY	DATE

*James H. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

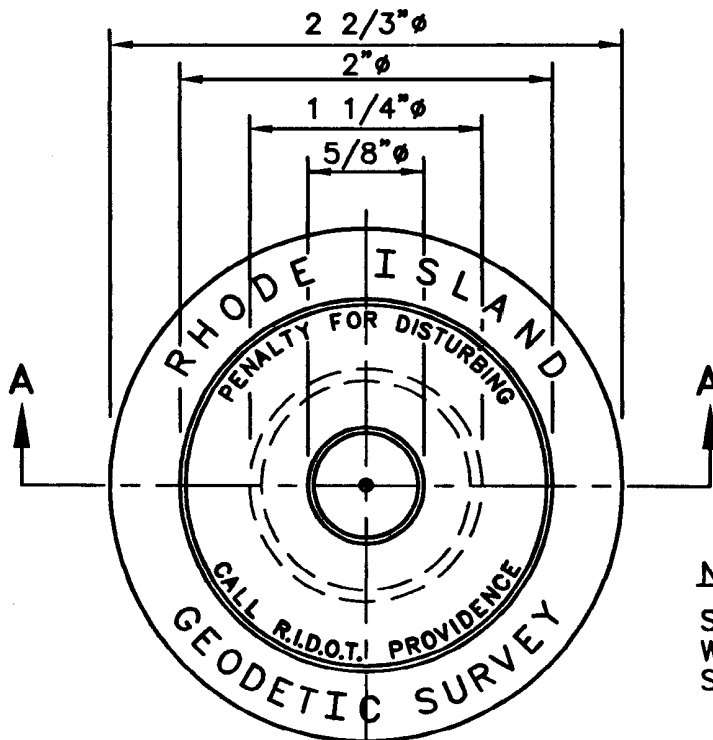
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



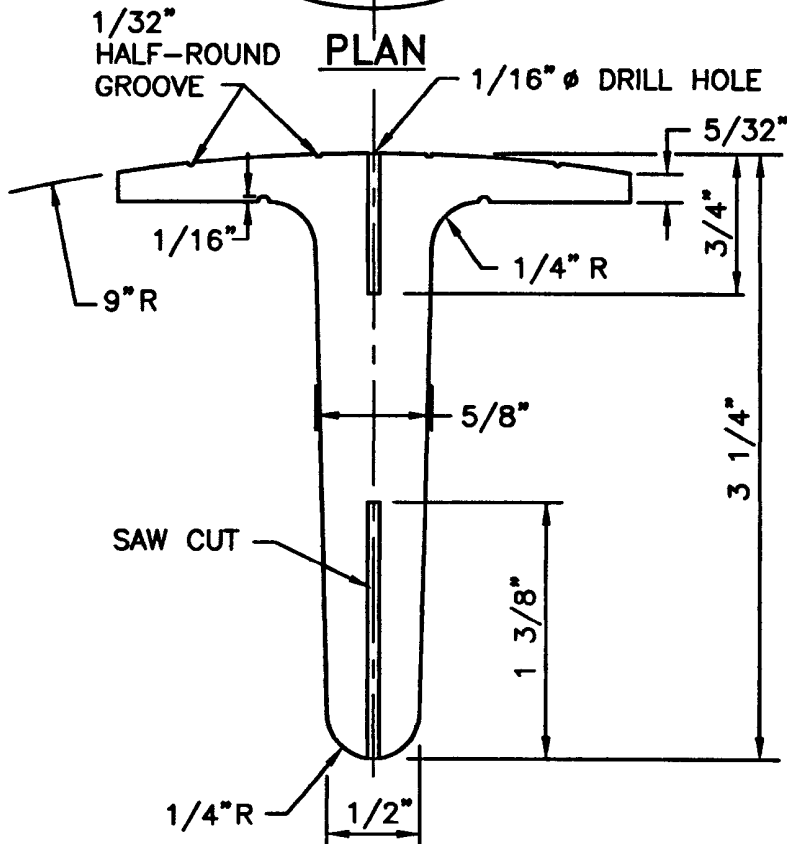






**NOTE:**

SHALL BE IN ACCORDANCE  
WITH SECTION 915 OF THE R.I.  
STANDARD SPECIFICATIONS.



**SECTION A-A**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GEODETIC SURVEY DISK**

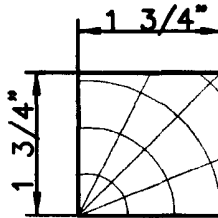
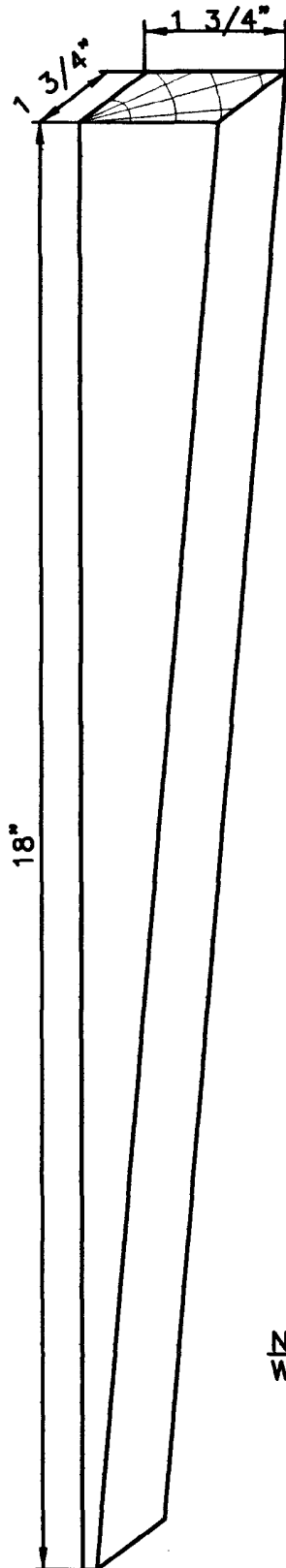
REVISIONS		
NO.	BY	DATE

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





PLAN

NOTE:  
WEDGE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

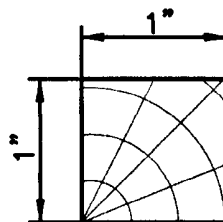
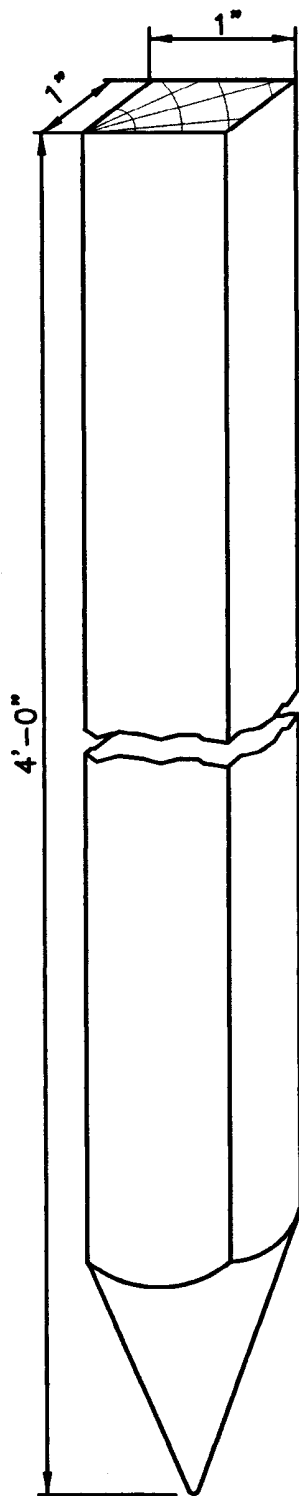
SURVEY WEDGE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





PLAN

NOTE:  
STAKE SHALL BE OF SEASONED OAK AND FREE OF KNOTS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### SURVEY STAKE

#### REVISIONS

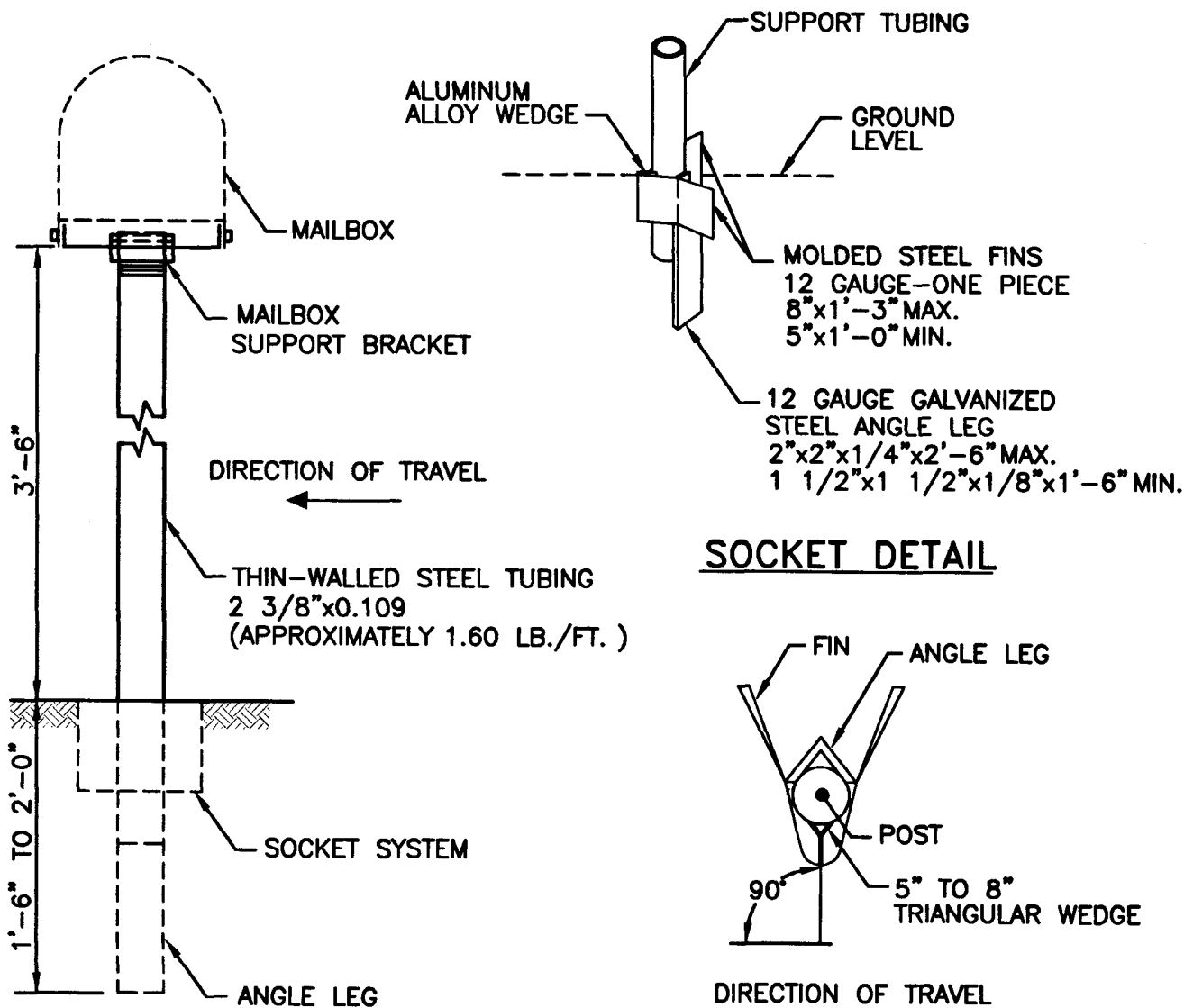
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
14.5.1



#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR WILL REPLACE EXISTING BOX IF BOX DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER ADVICE OF LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED, THE MINIMUM SPACING OF SUPPORT POSTS SHALL BE 3'-0".
6. USE 8-0.1875"x0.75" BOLTS WITH LOCKWASHERS FOR ALL SIZE BOXES (4 EACH SIDE).

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

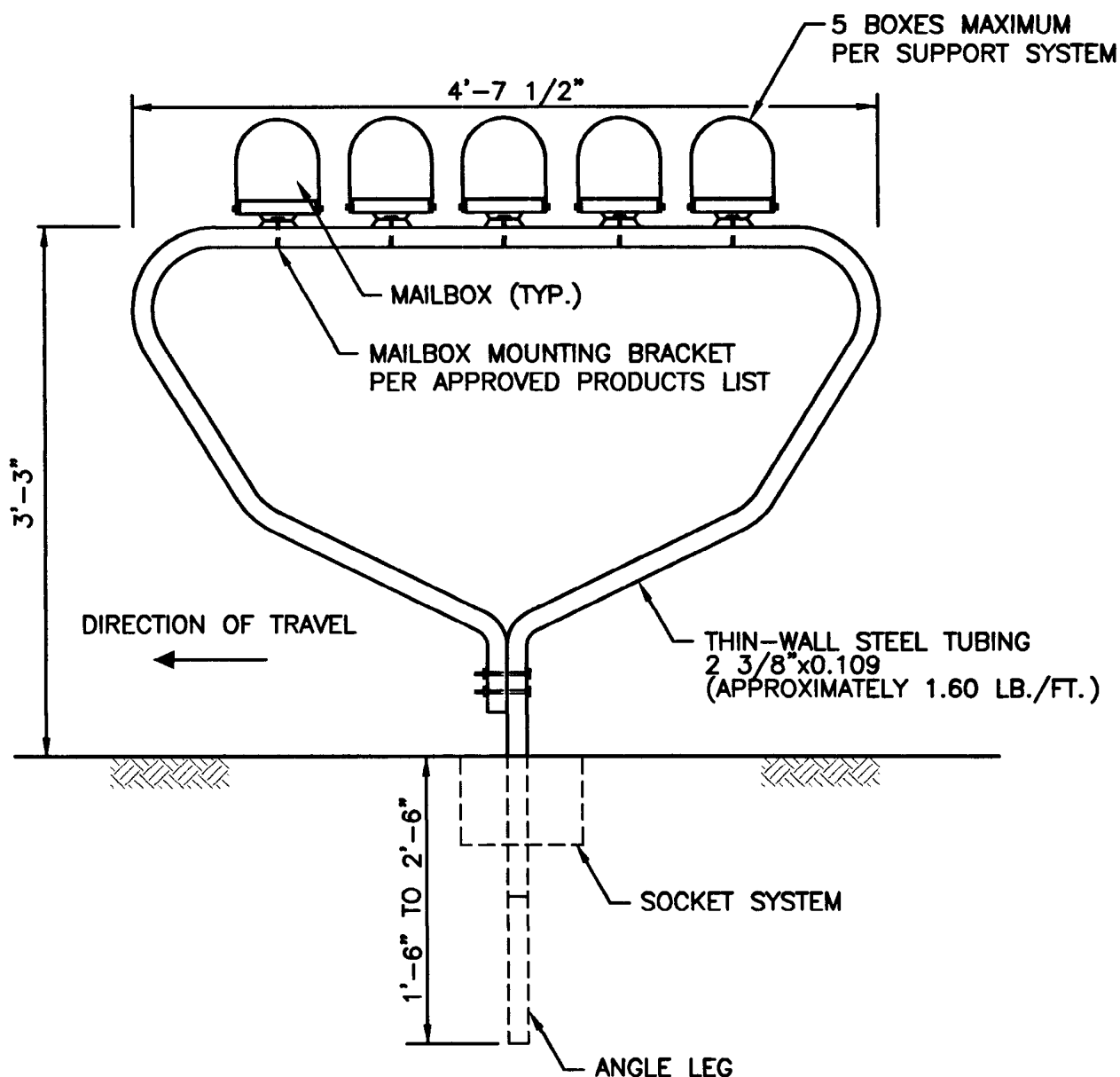
### POST AND MOUNTING FOR RURAL MAILBOX

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 917 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONTRACTOR SHALL REPLACE EXISTING BOX IF IT DOES NOT CONFORM TO U.S. POSTAL SERVICE SPECIFICATIONS. CONTRACTOR SHALL USE U.S. POSTAL SERVICE BOX 1, 1A OR 2.
3. LOCATION OF POSTS TO BE SET UNDER THE ADVICE OF THE LOCAL MAIL CARRIER.
4. ALL METAL SURFACES (INCLUDING MAILBOX) AND HARDWARE SHALL BE GALVANIZED WITH A MINIMUM GALVANIZED COATING OF 1.9 MILS.
5. WHEN MORE THAN ONE SUPPORT SYSTEM IS TO BE INSTALLED THE MINIMUM SPACING OF THE SUPPORT POSTS SHALL BE 4'-7 1/2".
6. FOR SOCKET SYSTEM DETAILS SEE STD. 15.1.0.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**POST AND MULTIPLE MOUNTINGS  
FOR RURAL MAILBOXES**

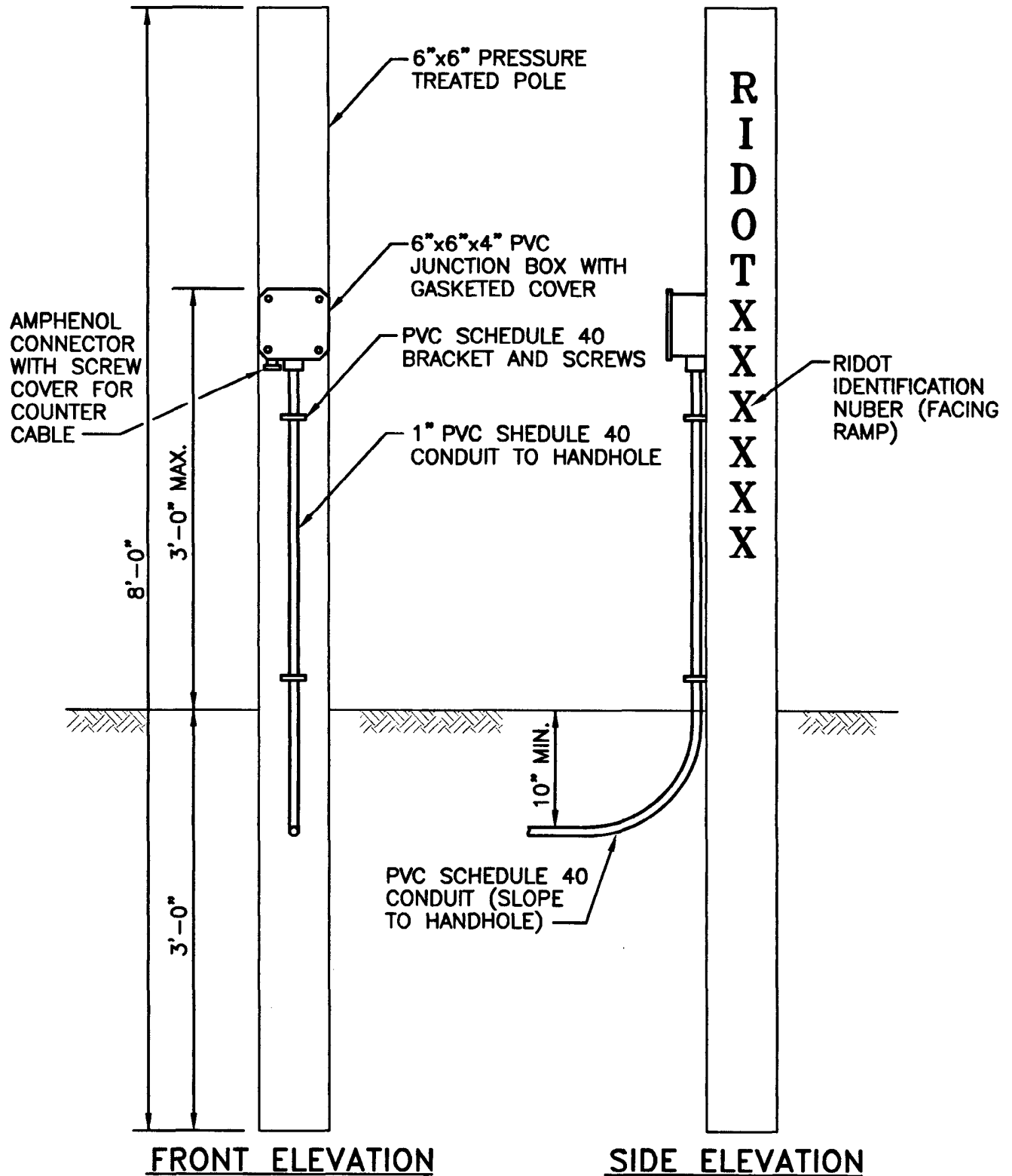
REVISIONS		
NO.	BY	DATE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

## TRAFFIC MONITORING STATION SINGLE JUNCTION BOX WOOD POST DETAIL

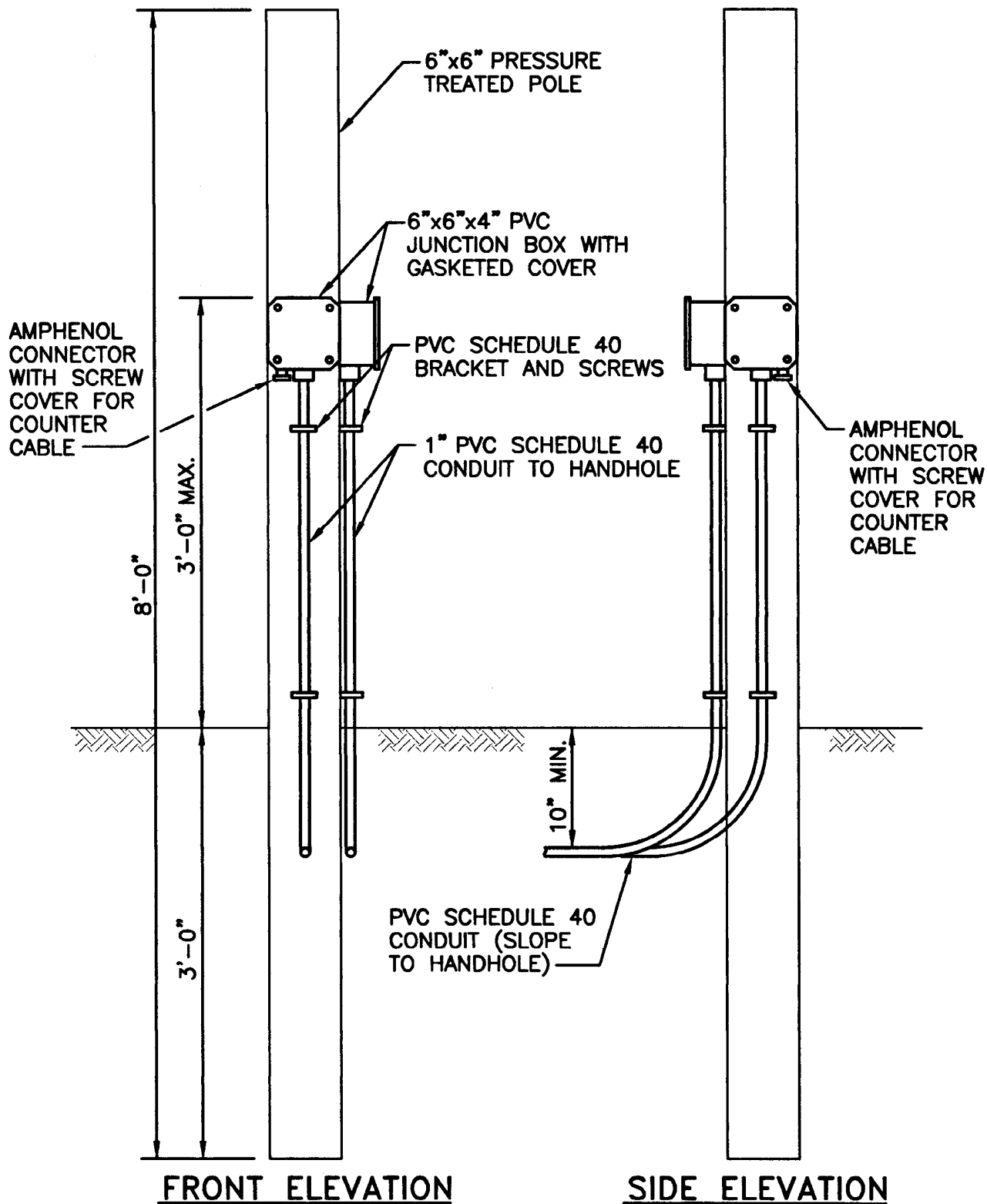
REVISIONS		
NO.	BY	DATE

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

## TRAFFIC MONITORING STATION DOUBLE JUNCTION BOX WOOD POST DETAIL

REVISIONS		
NO.	BY	DATE

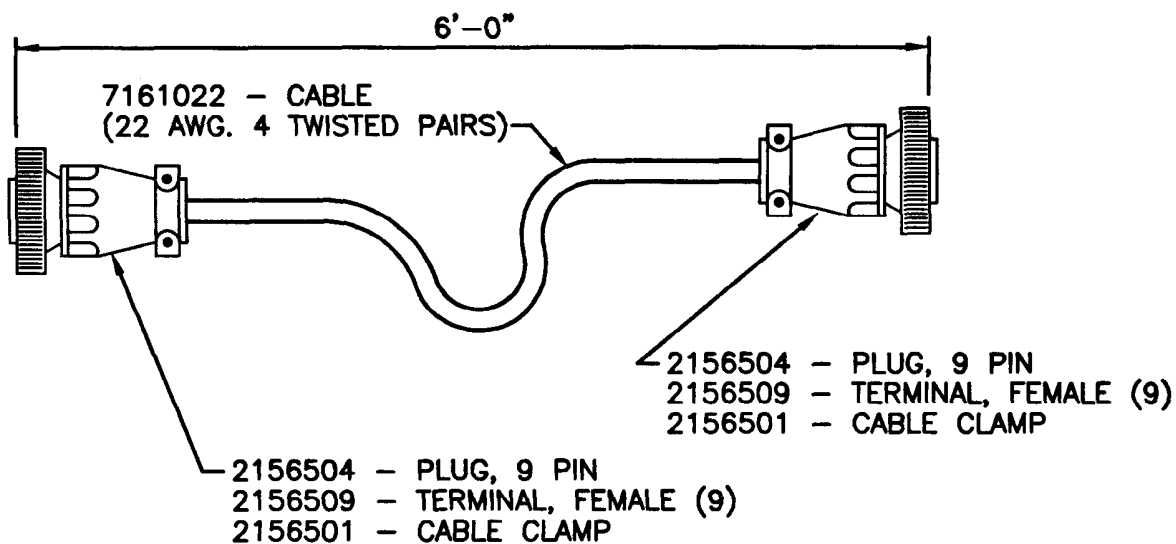
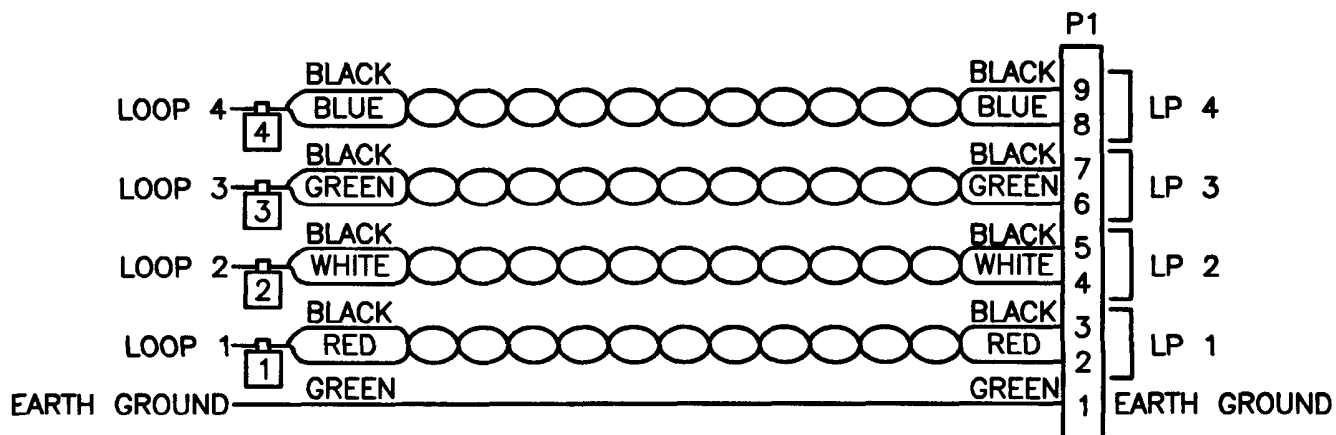
*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

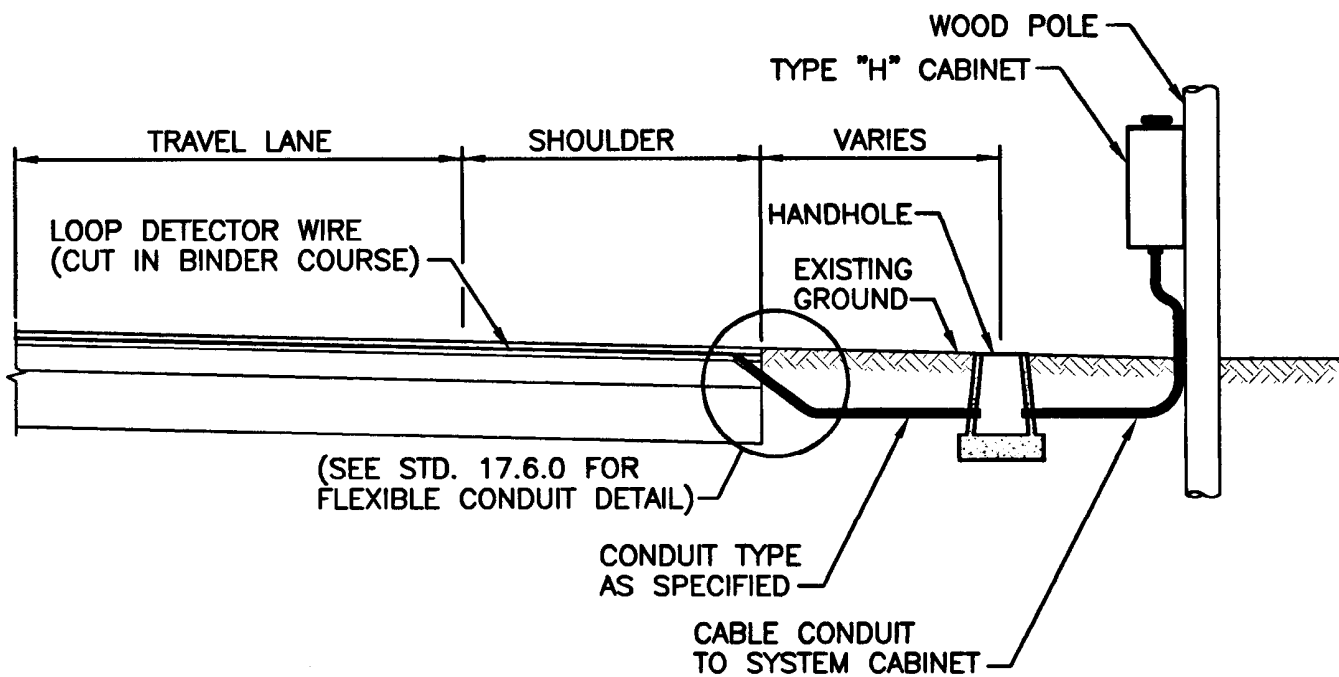
### TRAFFIC MONITORING STATION PORTABLE COMPUTER CABLE

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
17.2.0



# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

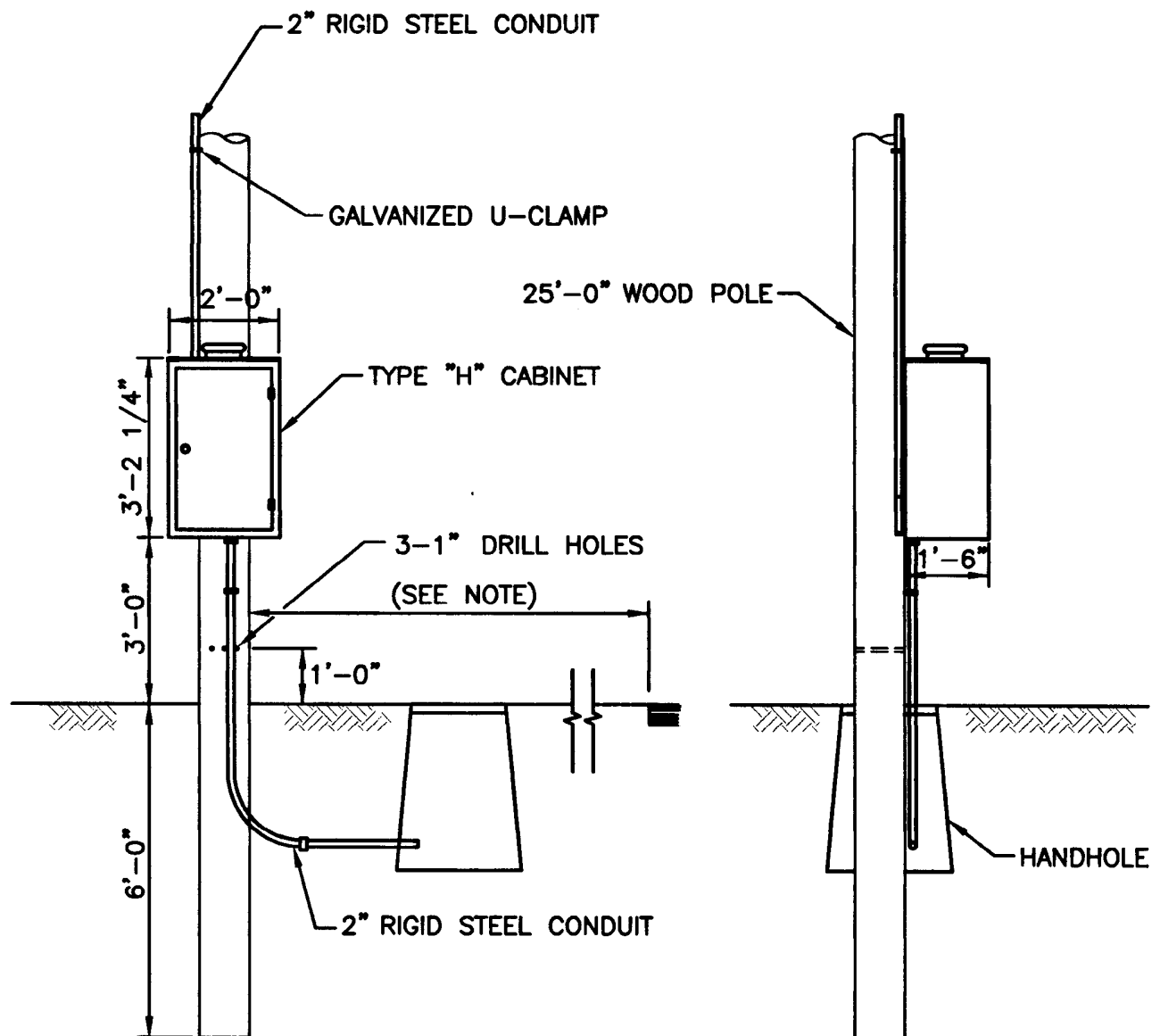
## TRAFFIC MONITORING STATION POLE MOUNTED CABINET

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







FRONT ELEVATION

SIDE ELEVATION

**NOTE:**

1. TYPE "H" CABINET MUST BE LOCATED A MIN. OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.
2. PROVIDE WEATHER HEAD AT TOP OF POLE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			TRAFFIC MONITORING STATION TYPE "H" CABINET POST MOUNTED INSTALLATION		<div><div>R.I. STANDARD 17.3.1</div></div>
NO.	BY	DATE			
			<div><div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div></div>		

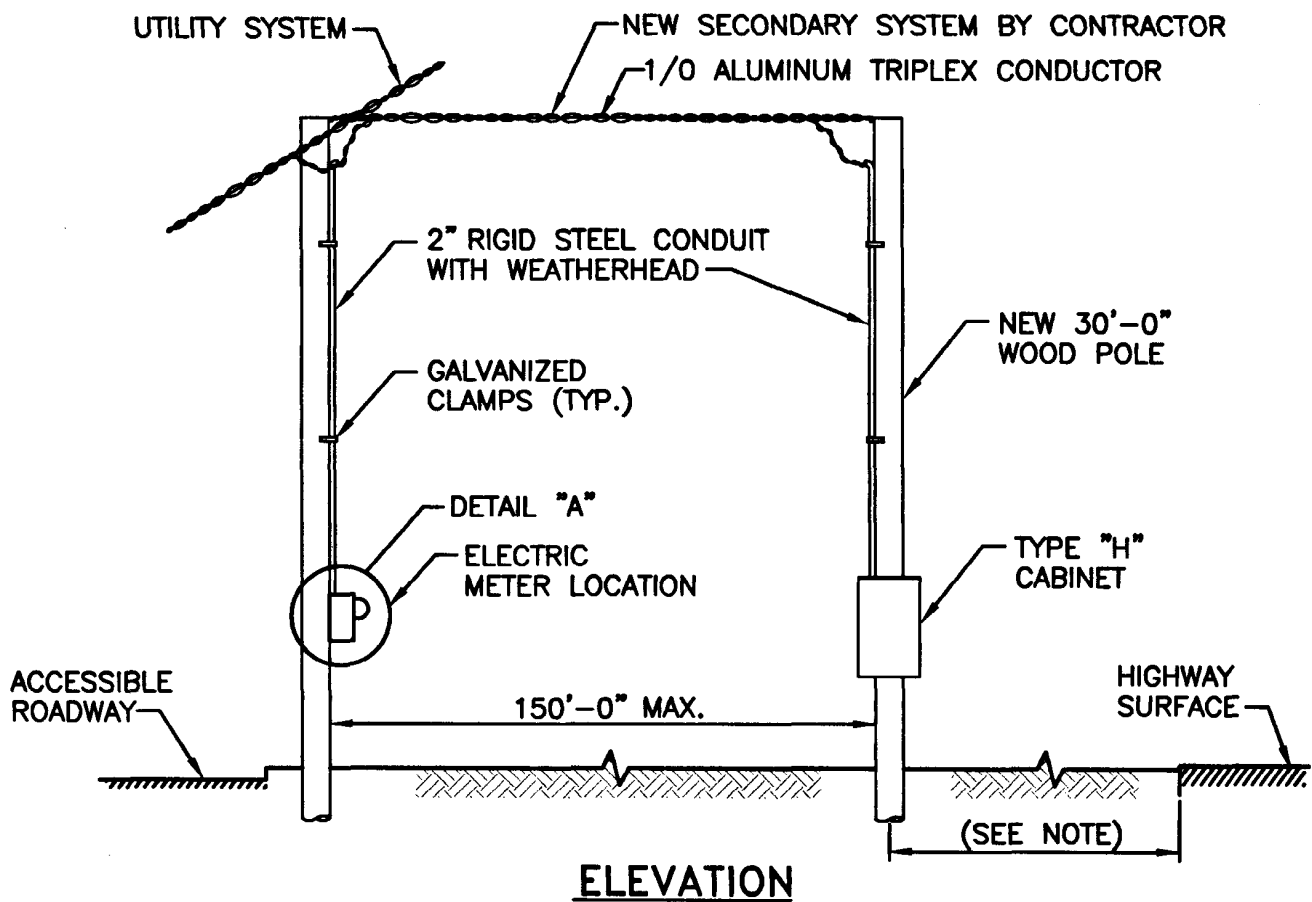
2" RIGID STEEL CONDUIT  
FOR SECONDARY SERVICE

2" RIGID STEEL CONDUIT  
FOR RIDOT SYSTEM

METER MAIN (100A.)  
120/240 VOLT  
(BY CONTRACTOR)

WOOD POLE  
(EITHER BY UTILITY  
OR CONTRACTOR)

### DETAIL "A"



#### NOTE:

TYPE "H" CABINET MUST BE LOCATED A MINIMUM OF 30'-0" FROM PAVED HIGHWAY SURFACE OR LOCATED BEHIND A PROTECTIVE BARRIER.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

#### REVISIONS

NO.	BY	DATE

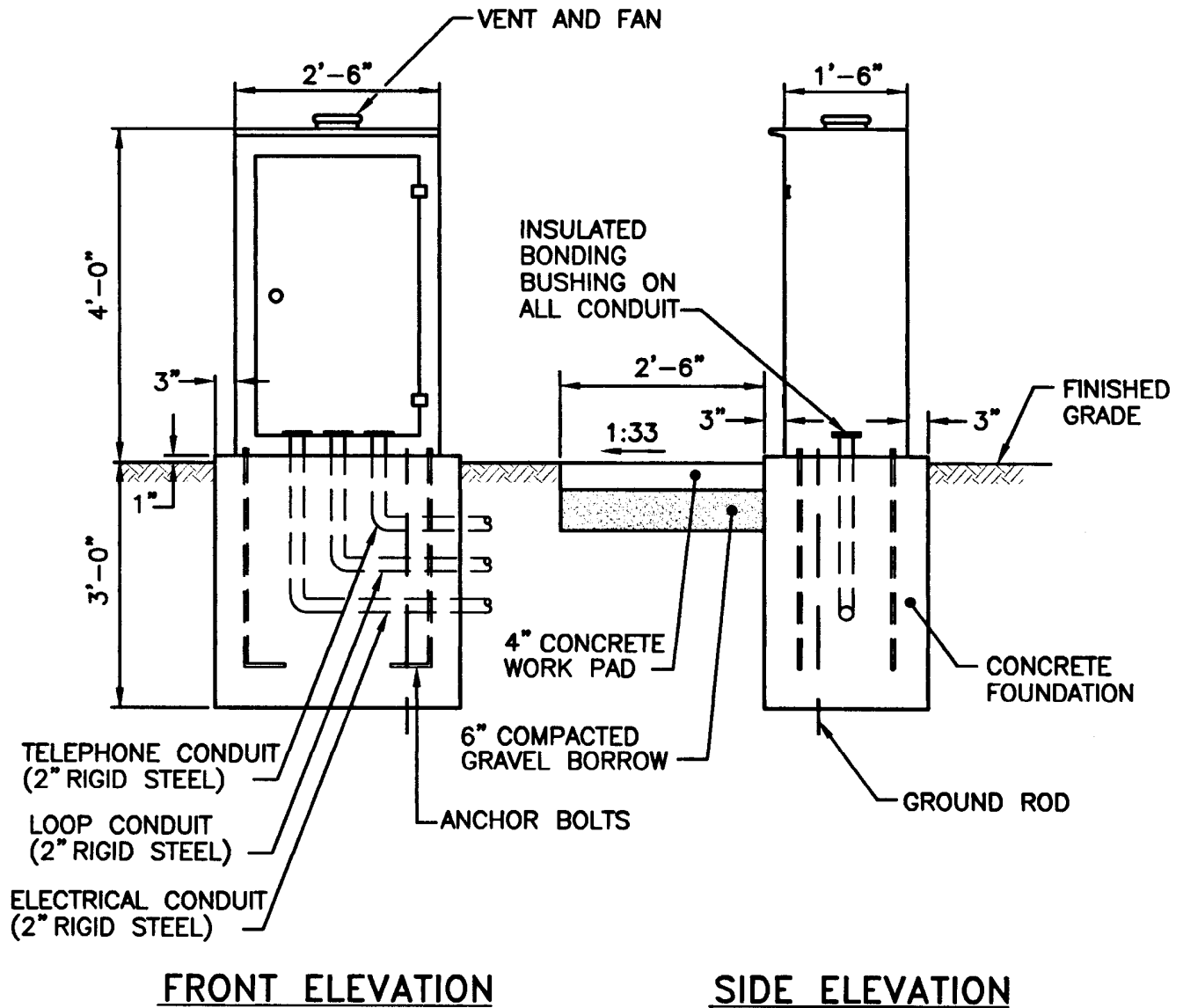
### TRAFFIC MONITORING STATION TYPE "H" CABINET - ELECTRIC SERVICE

*James H. Cypriote*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
17.3.2

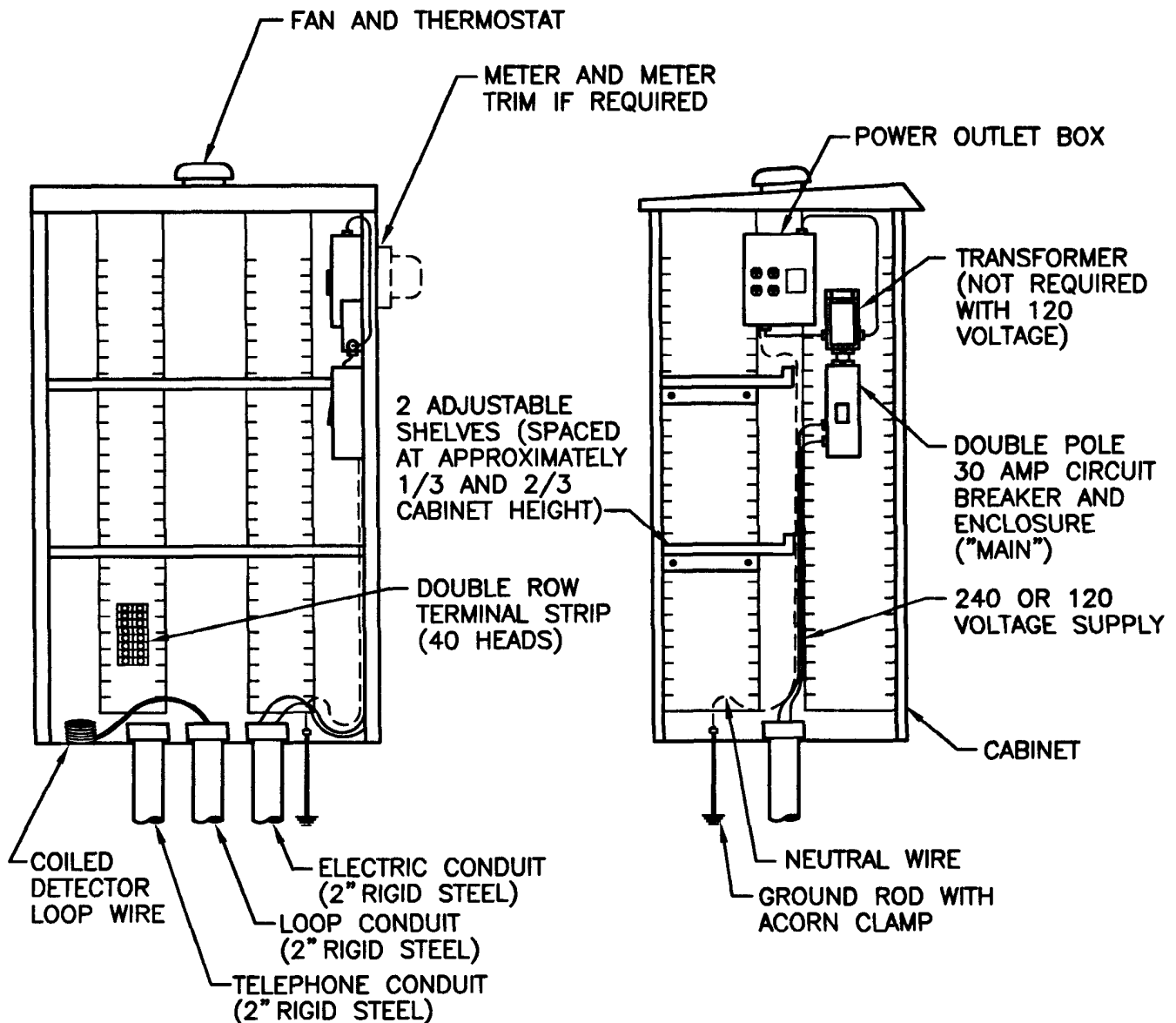


**NOTE:**

GASKET AND/OR CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHERTIGHT SEAL.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			TRAFFIC MONITORING STATION CONTROLLER CABINET GROUND MOUNTED INSTALLATION		<div><div>R.I. STANDARD 17.4.0</div></div>
NO.	BY	DATE			
			<div><div><div>James H. Gagliardi</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div></div>		
			JUNE 15, 1998 ISSUE DATE		



**FRONT SECTION**

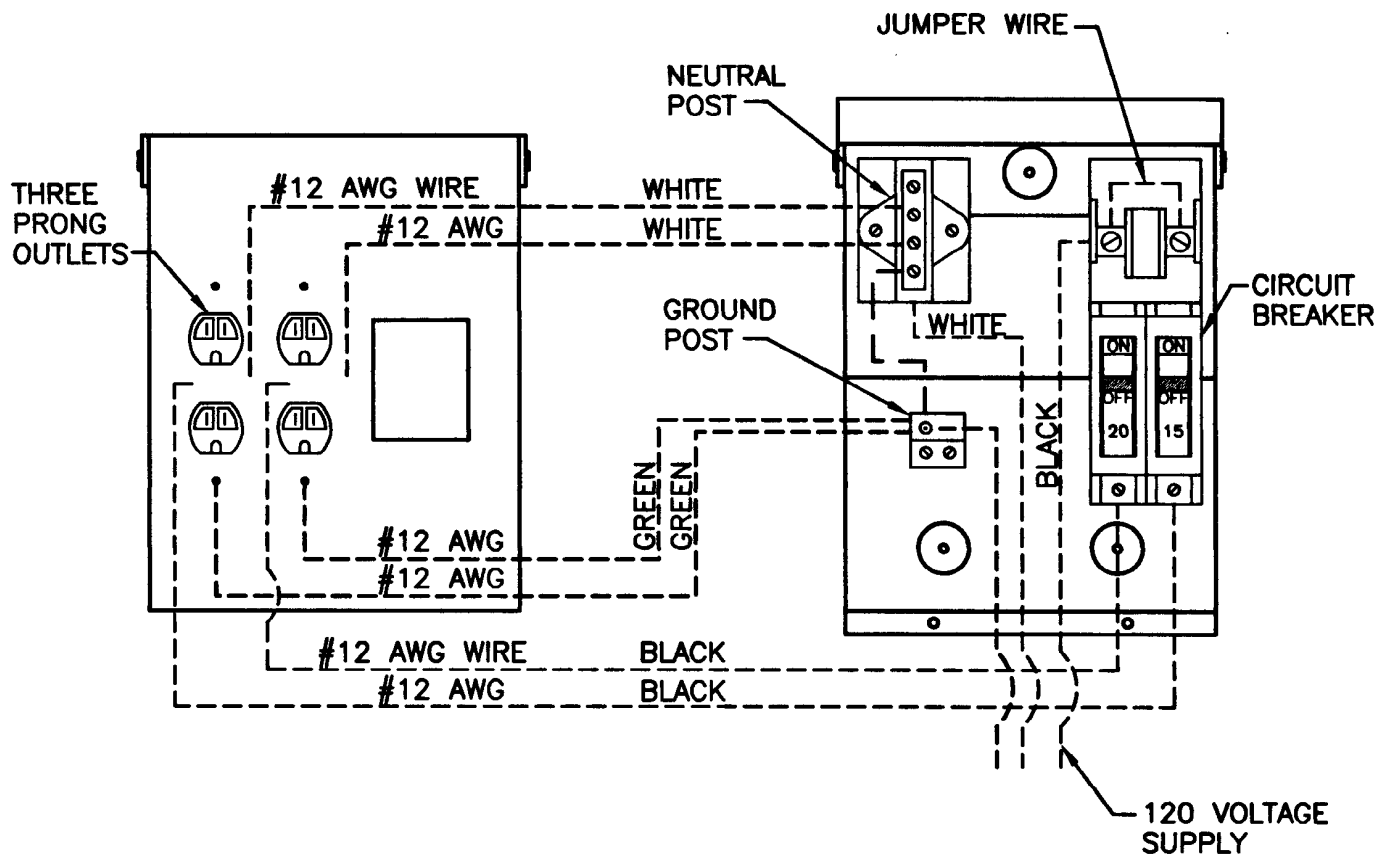
**SIDE SECTION**

**NOTES:**

1. TRANSFORMER MUST BE WIRED TO ALLOW 120 SECONDARY VOLTAGE AT POWER OUTLET BOX.
2. WIRING SHOWN WITHOUT METER. IF METER IS REQUIRED, WIRE METER BETWEEN CONDUIT AND "MAIN."
3. 3/4" MARINE PLYWOOD TO BE USED AS BACKING TO MOUNT ACCESSORIES.
4. DOUBLE POLE BREAKER SWITCH REQUIRED FOR 220 VOLTAGE ONLY. SINGLE POLE BREAKER WITH ENCLOSURE MAY BE USED FOR 110 VOLTAGE.
5. INSTALLATION TO INCLUDE TELEPHONE JACK, PULL CHAIN LIGHT AND SURGE ARRESTOR.
6. PROVIDE 60 AMP SERVICE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			TRAFFIC MONITORING STATION CONTROLLER CABINET WIRING DETAILS - INTERIOR		<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 17.4.1 </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">   CHIEF DESIGN ENGINEER TRANSPORTATION </div> </div>		JUNE 15, 1998 ISSUE DATE



COVER AND OUTLETS

POWER OUTLET BOX

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

TRAFFIC MONITORING STATION  
POWER OUTLET BOX

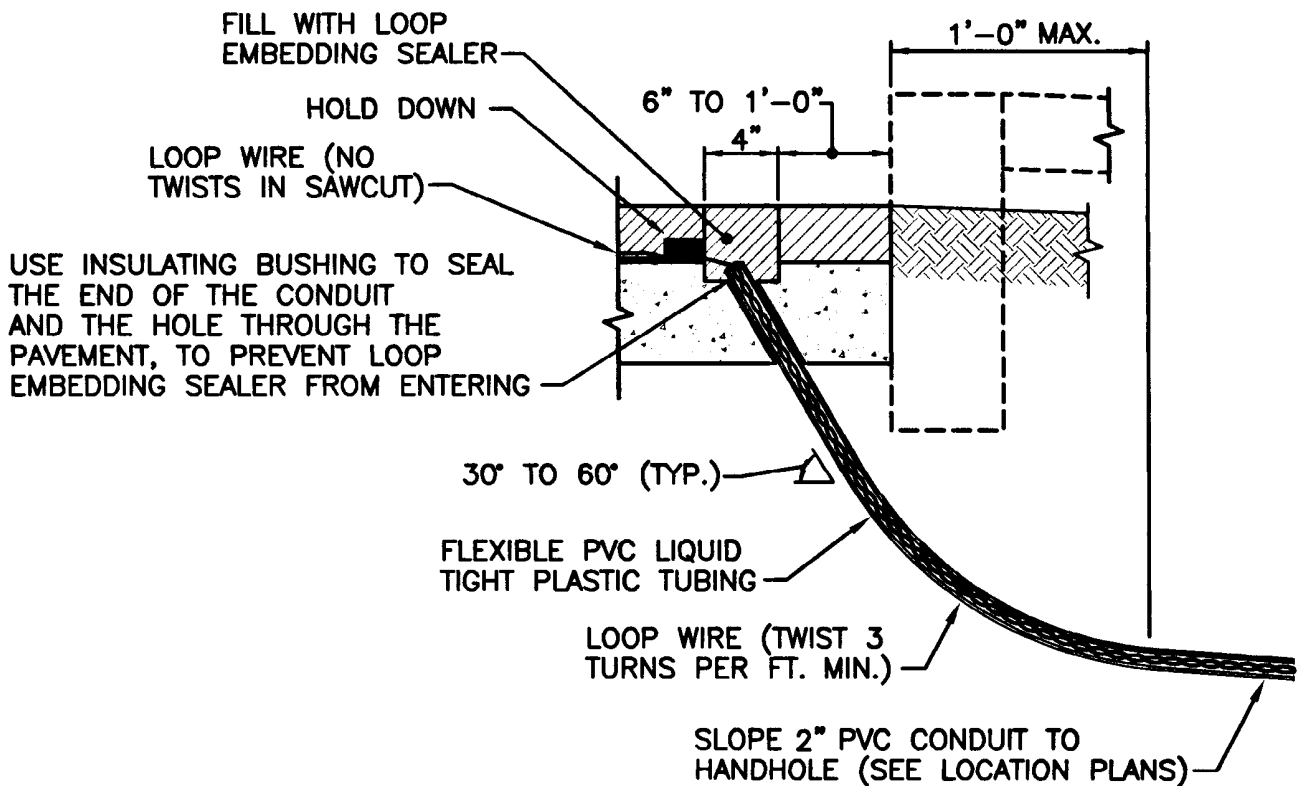
REVISIONS		
NO.	BY	DATE

*James A. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. DO NOT USE SHARP OBJECTS TO HOLD DOWN WIRE.
2. CURB DETAIL IS SHOWN BY DASHED LINES, RUN THE CONDUIT UNDER THE CURB.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**TRAFFIC MONITORING STATION  
FLEXIBLE CONDUIT INSTALLATION**

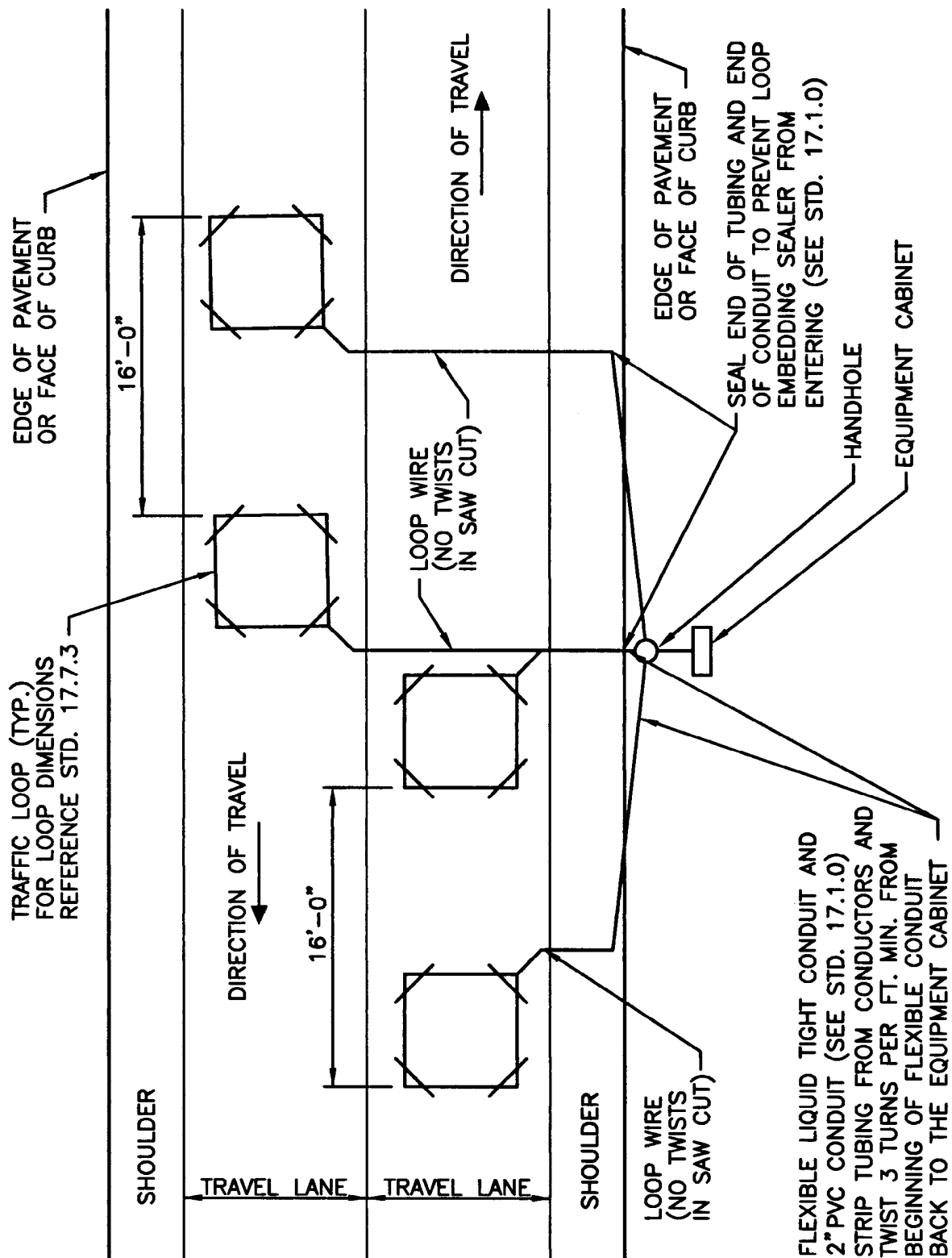
*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

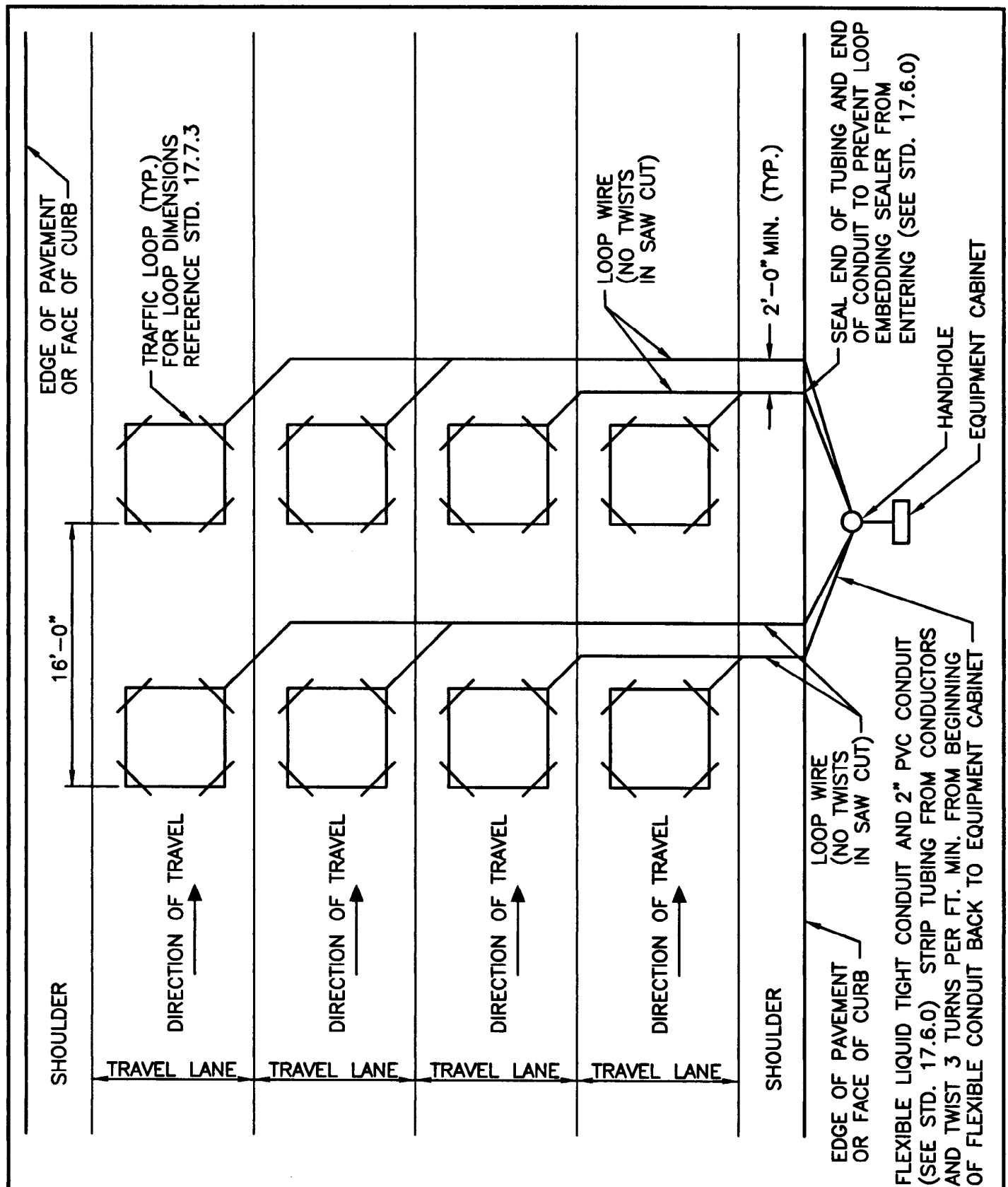
## TRAFFIC MONITORING STATION LOOP WIRE LAYOUT FOR DIRECTIONAL COUNTING

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

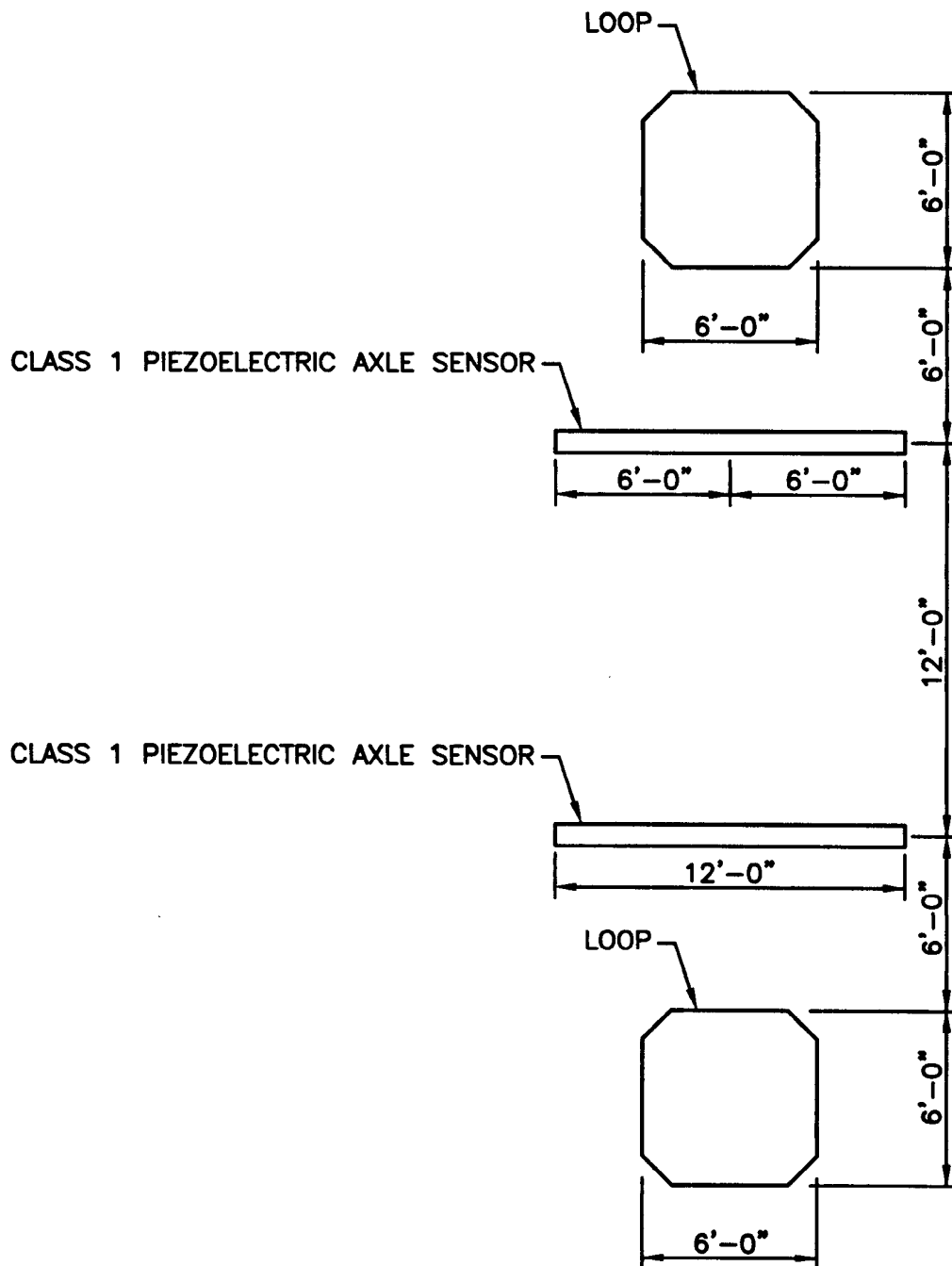
## TRAFFIC MONITORING STATION LOOP WIRE LAYOUT FOR MULTIPLE LANES IN THE SAME DIRECTION

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

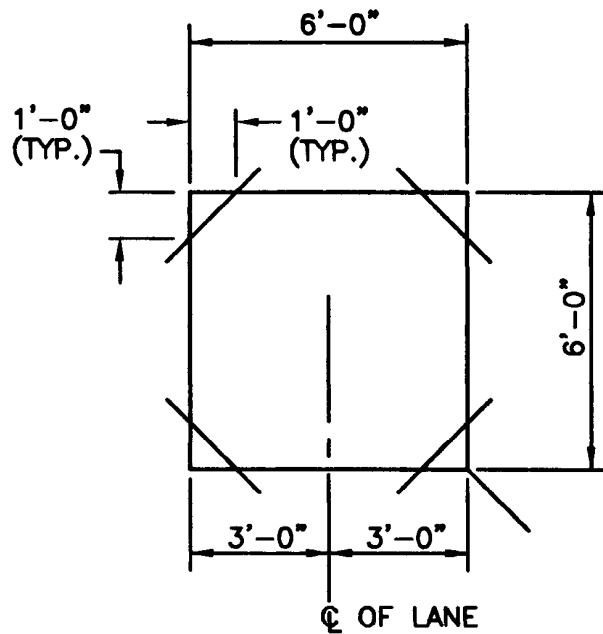
## TRAFFIC MONITORING STATION AXLE SENSOR AND LOOP LAYOUT

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

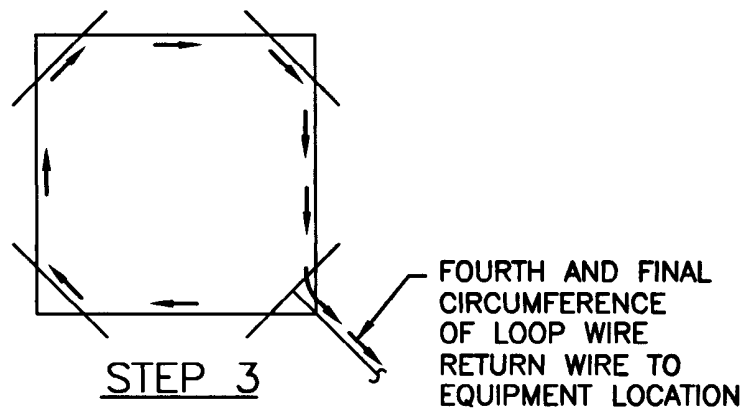
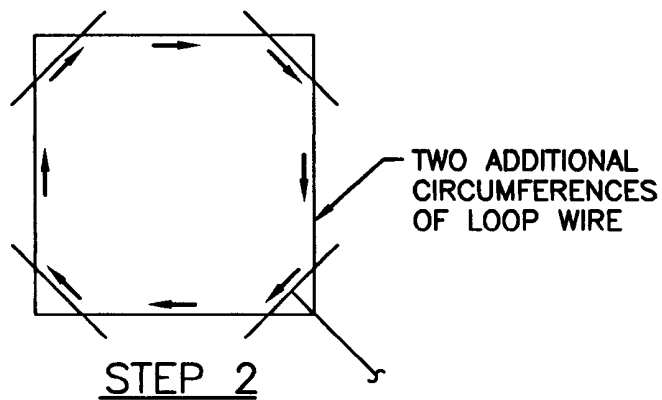
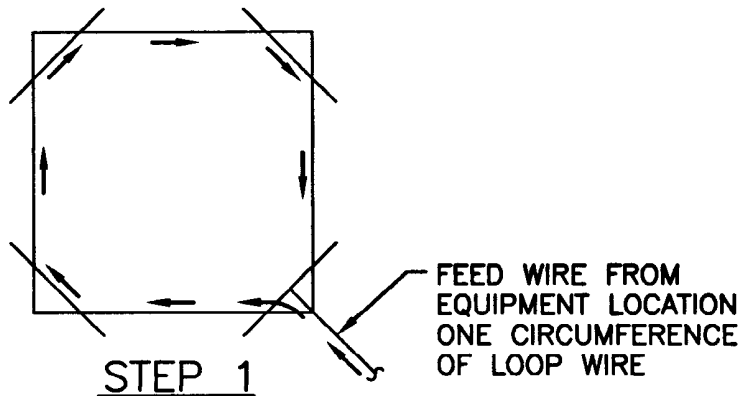
## TRAFFIC MONITORING STATION LOOP DIMENSIONS

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

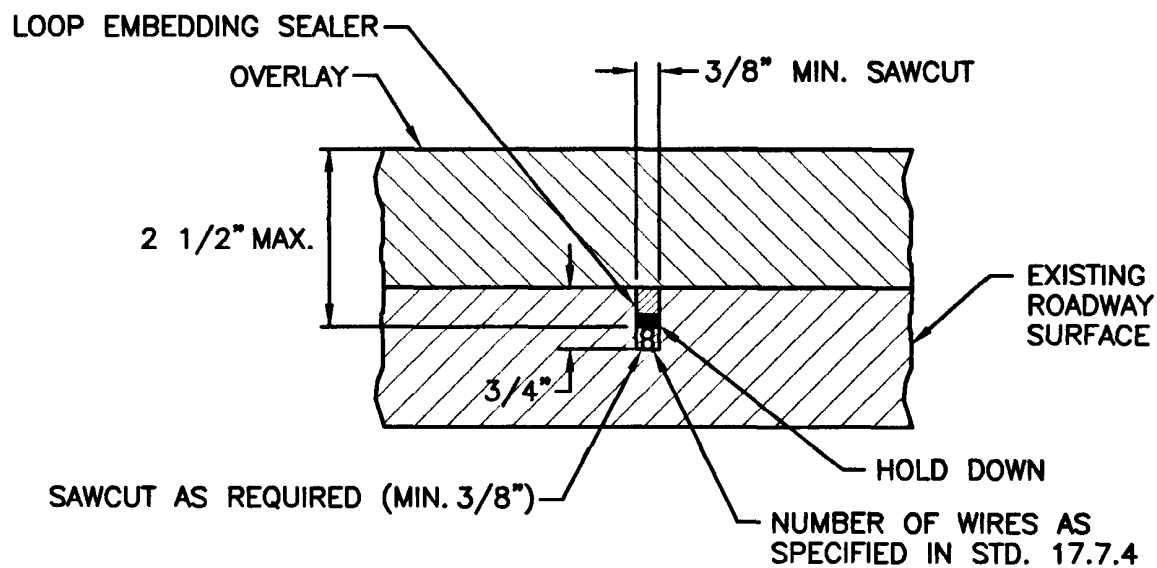
### TRAFFIC MONITORING STATION LOOP WIRE INSTALLATION

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



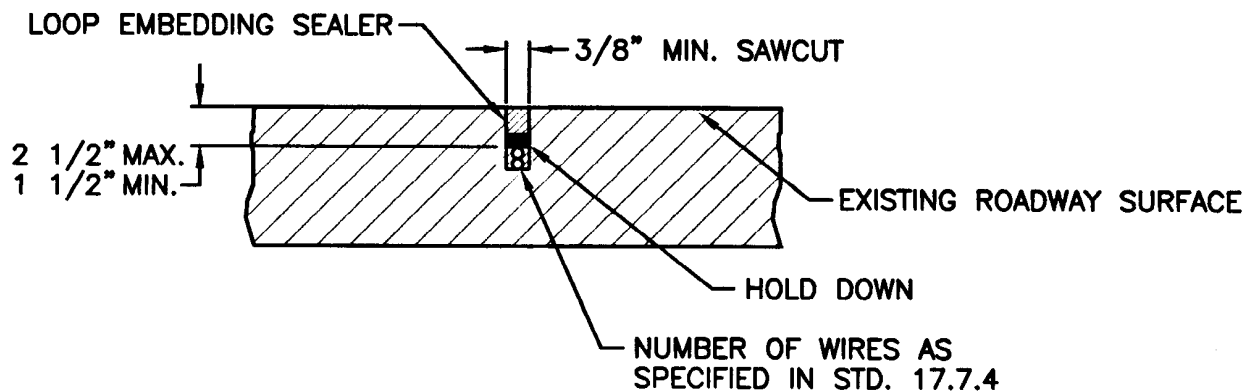


**NOTE:**

USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION



REVISIONS			TRAFFIC MONITORING STATION SAWCUT CROSS-SECTION WITH A PAVEMENT OVERLAY		<div style="border: 2px solid black; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> R.I. STANDARD <b>17.7.5</b> </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">   <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;">   <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <b>JUNE 15, 1998</b>  <small>ISSUE DATE</small> </div> </div>		

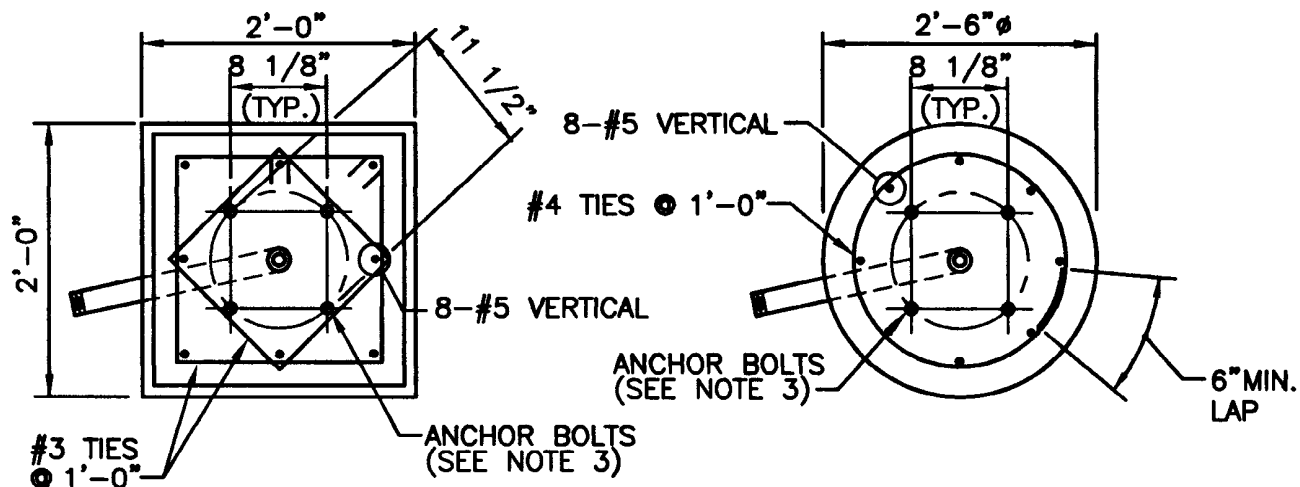


**NOTE:**

USE SHORT (2" TYP.) PIECES OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			TRAFFIC MONITORING STATION SAWCUT CROSS-SECTION WITHOUT A PAVEMENT OVERLAY		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>17.7.6</b> </div>
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE



2" THREADED INSULATED  
GROUNDING BUSHING

1" CHAMFER  
(SEE NOTE 2)

(SEE NOTE 7)

1'-6"

1 1/8"

4"

2" PITCH

TIES @ 1'-0" O.C.

3" COVER (MIN.)

3" (TYP.)

**SECTION**

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. 2" GALVANIZED CONDUIT WITH 92° BEND AND 1'-6" RADIUS, PROJECTING 2 3/4" AS SHOWN. THREADS TO HAVE PROTECTOR.
3. BOLTS - (4) 1" Ø x 5'-6" LONG WITH 4" HOOK.
4. STD. 18.3.5 TO BE USED WITH THIS STANDARD.
5. DESIGN BOLT TENSION = 30 K.
6. FOUNDATION DESIGN IS BASED ON COMPETENT GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.
7. 2 3/4" PROJECTION OF (4) 1" Ø x 5'-6" LONG BOLTS. ALL GALVANIZED BOLTS ON A 11 1/2" BOLT CIRCLE SHALL BE SHIPPED WITH GALVANIZED WASHERS AND GALVANIZED HEX NUTS (BOLT THREAD IS 8NC). BOLT MATERIAL IS 55,000 PSI MIN. YIELD.
8. FOUNDATIONS MAY BE PRECAST OR CAST IN-PLACE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**REVISIONS**

NO.	BY	DATE

**CONCRETE LIGHT STANDARD BASE**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

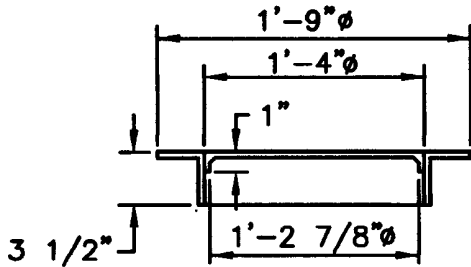
**JUNE 15, 1998**  
ISSUE DATE

R.I.  
STANDARD  
**18.1.0**



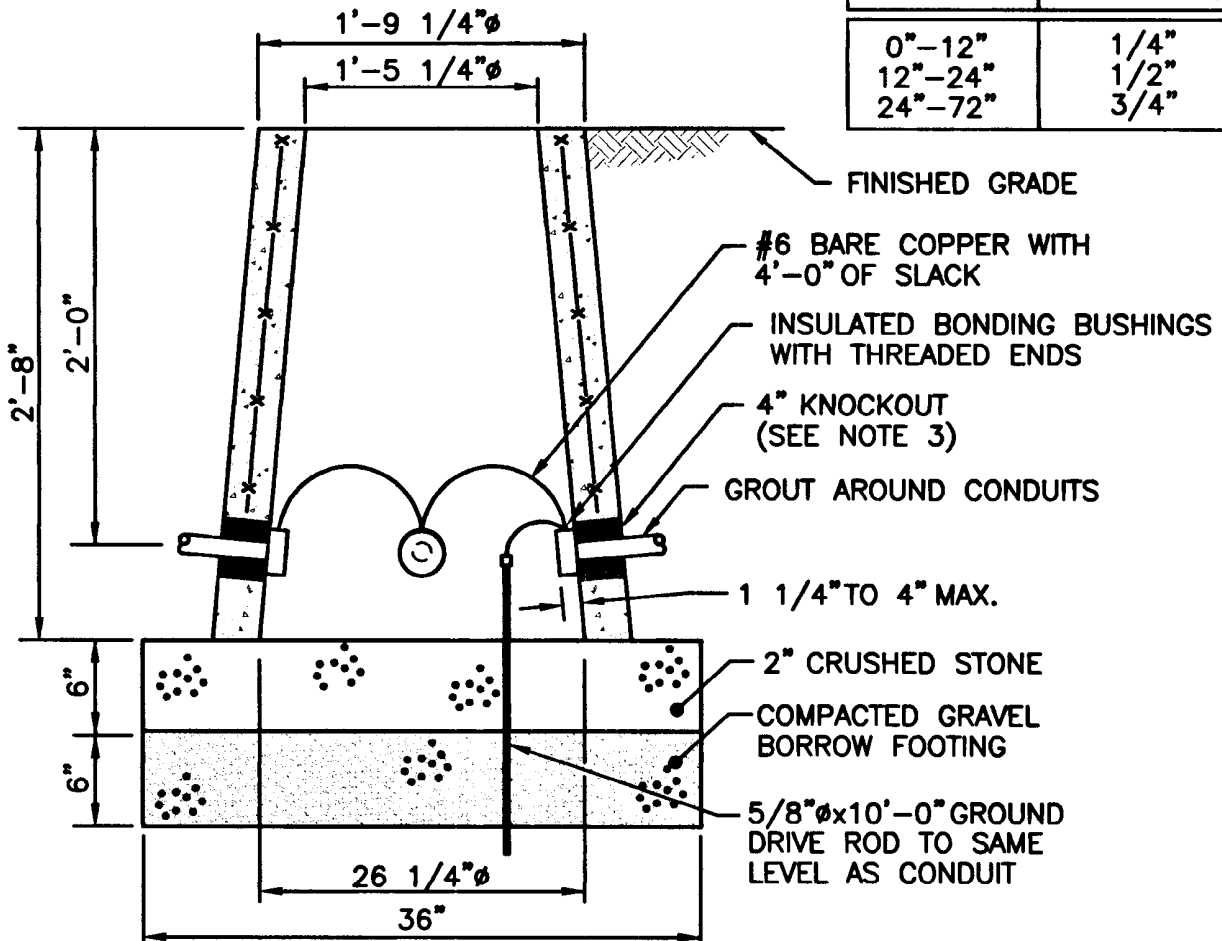
**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE R.I. STANDARD SPECIFICATIONS.
2. COVER TO HAVE DIAMOND SURFACE AND THE WORD "ELECTRIC" FOR ELECTRIC HANDHOLES, "SIGNAL" FOR SIGNAL HANDHOLES AND "COMM." FOR TELEPHONE HANDHOLES.
3. 4" KNOCKOUTS ARE TO BE PROVIDED ON ALL FOUR SIDES OF THE HANDHOLE. FOLLOWING CONDUIT INSTALLATION THE CONTRACTOR SHALL SEAL AROUND CONDUIT ENTRANCES WITH CEMENT.
4. MINIMUM REQUIRED CONCRETE REINFORCEMENT = 0.058 SQ. IN./LIN. FT. (EACH WAY).



**SECTION  
HANDHOLE RING AND COVER**

CONCRETE TOLERANCES	
DIMENSION	TOLERANCE
0"-12"	1/4"
12"-24"	1/2"
24"-72"	3/4"



**SECTION  
HANDHOLE TYPE "A"**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE




**PRECAST TYPE "A" HANDHOLE**

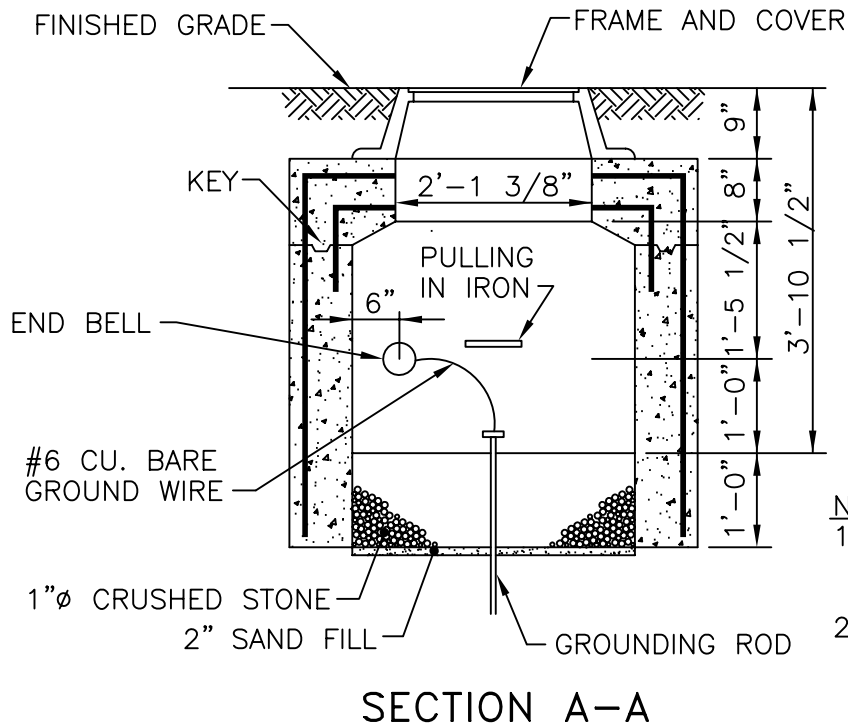
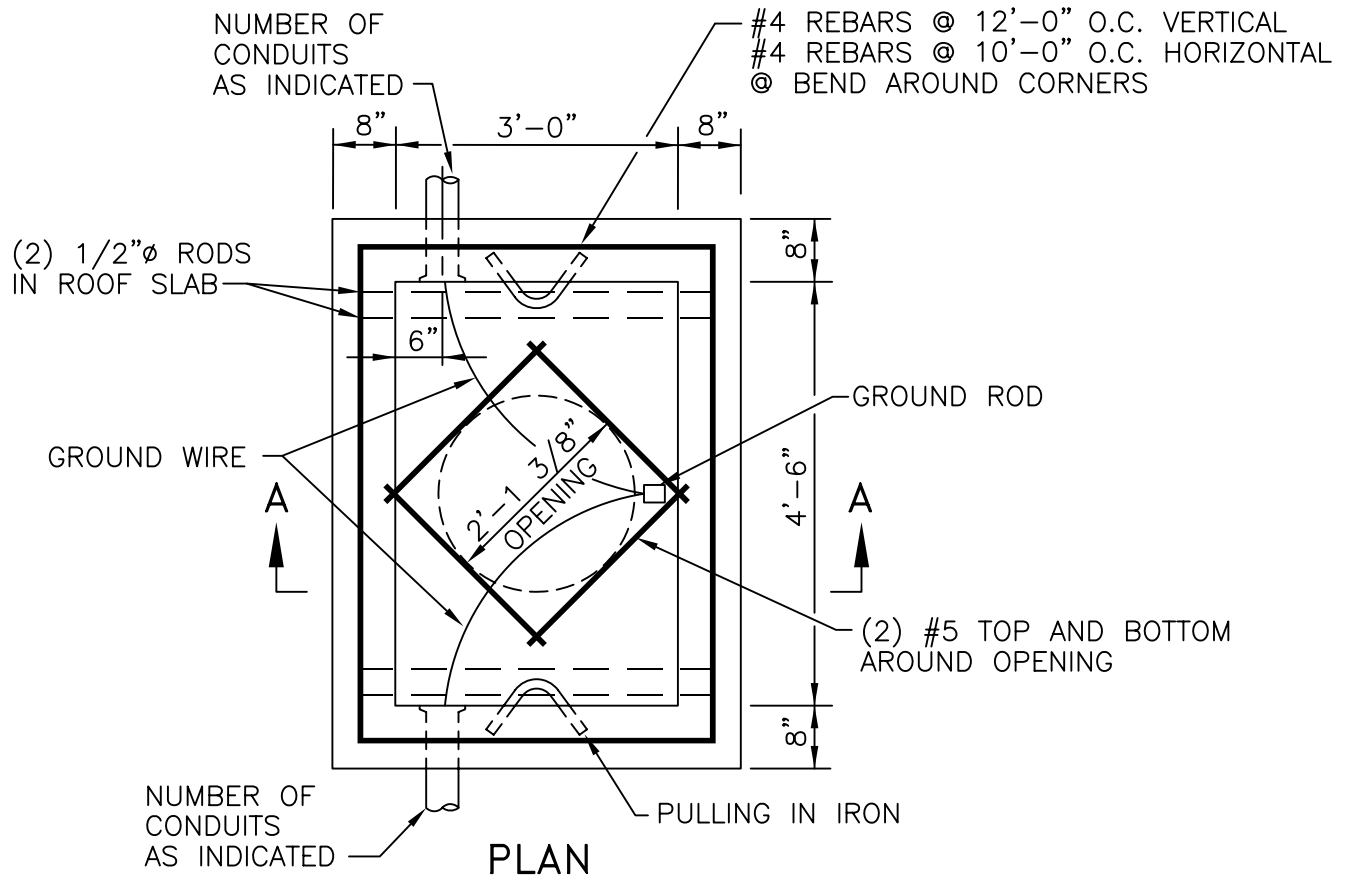
*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE



REVISIONS			PRECAST TYPE "H" HEAVY-DUTY HANDHOLE	
NO.	BY	DATE		
1	MLP	Mar 05		
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION
				JUNE 15, 1998 ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.05 OF THE R.I. STANDRAD SPECIFICATIONS.
2. COVER TO HAVE DIAMOND SURFACE AND THE WORD "ELECTRIC."

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**PRECAST TYPE "B" PULLBOX**

**REVISIONS**

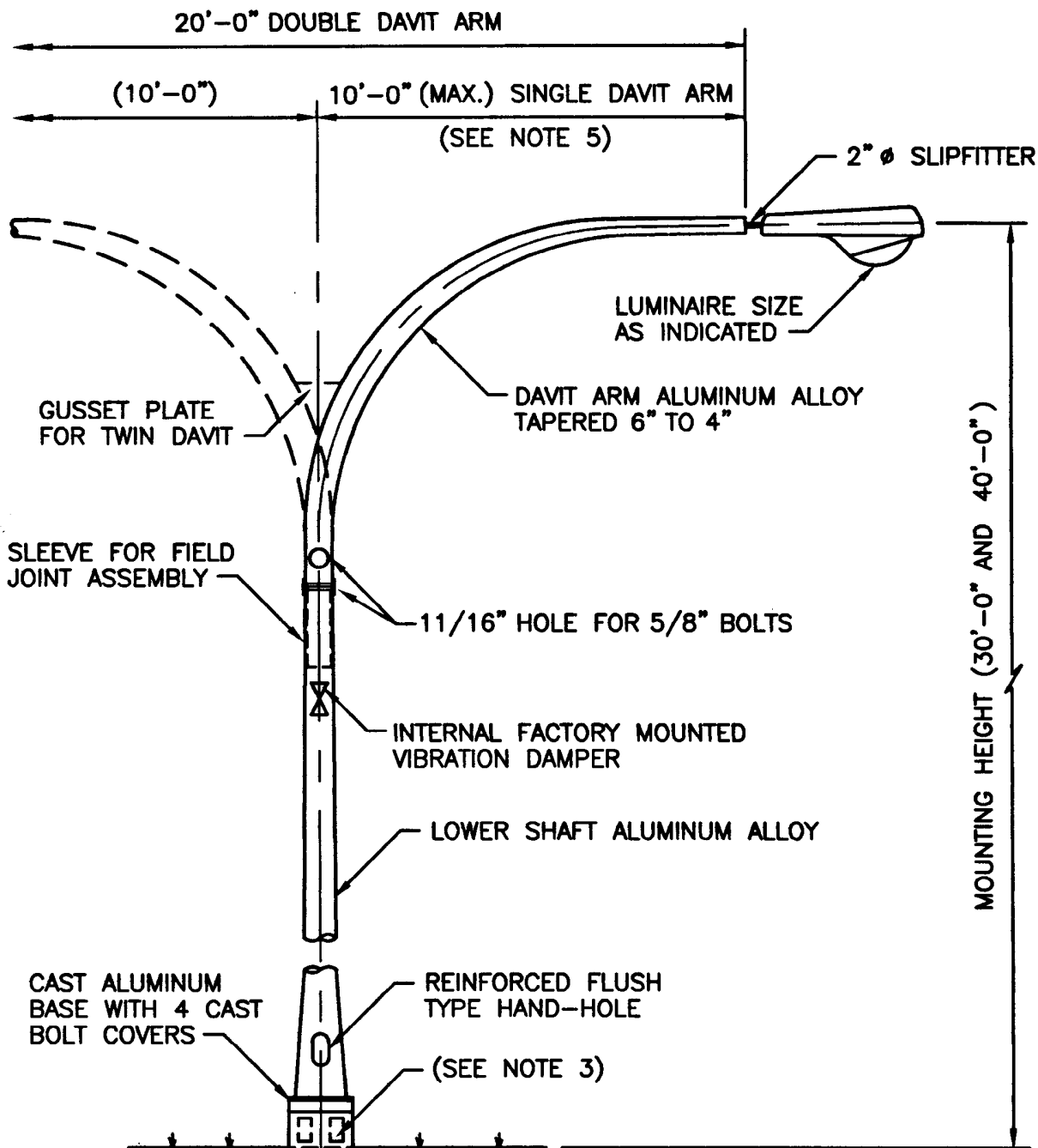
NO.	BY	DATE
1	MLP	Mar 05

*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
18.2.2



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. SEE CONTRACT DOCUMENTS FOR SPECIFIC POLE HEIGHTS AND DAVIT CONFIGURATIONS.
3. FOR BREAKAWAY COUPLING DETAIL, SEE STD. 18.3.4.
4. FOR FOUNDATION DETAILS, SEE STD. 18.1.0 AND 40.4.0.
5. SMALLER ARMS (4'-0" AND 6'-0") ALLOWED FOR RAMPS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

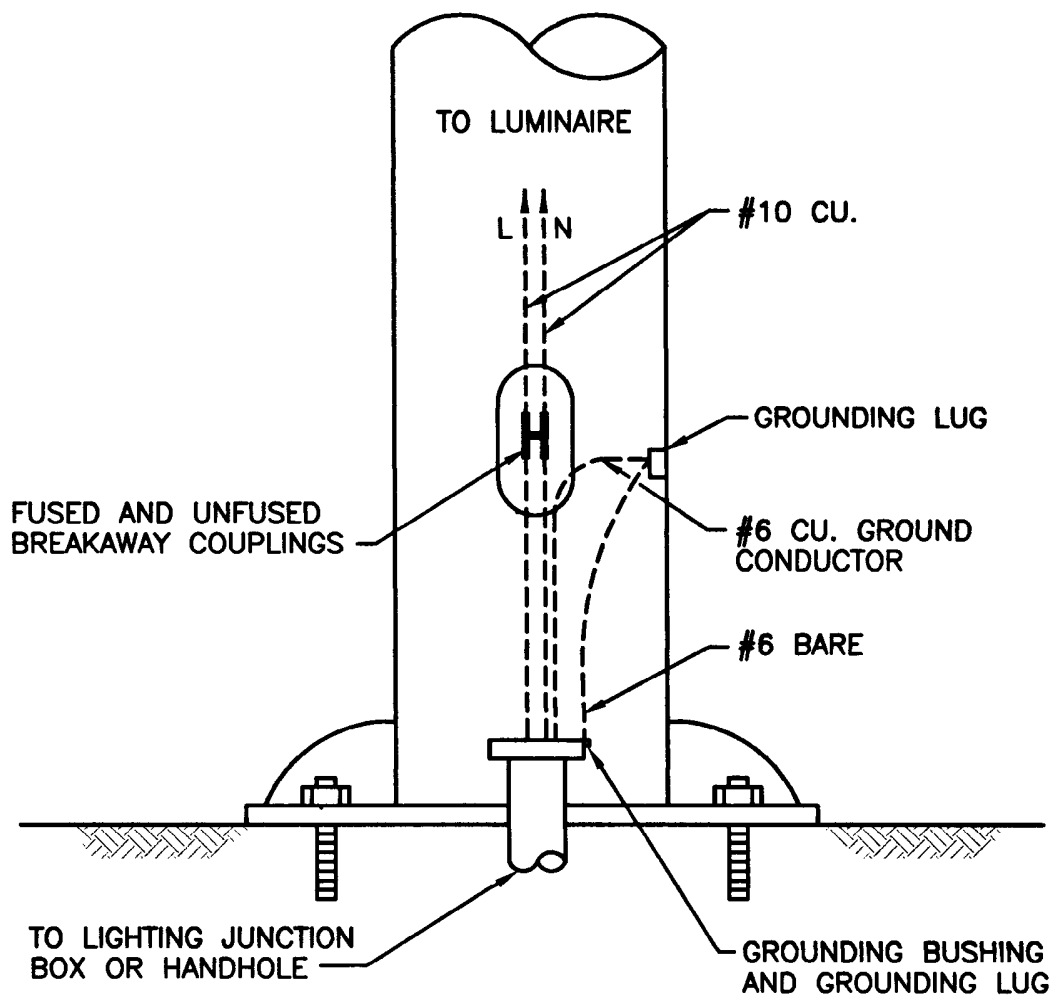
**ALUMINUM LIGHTING STANDARDS**

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

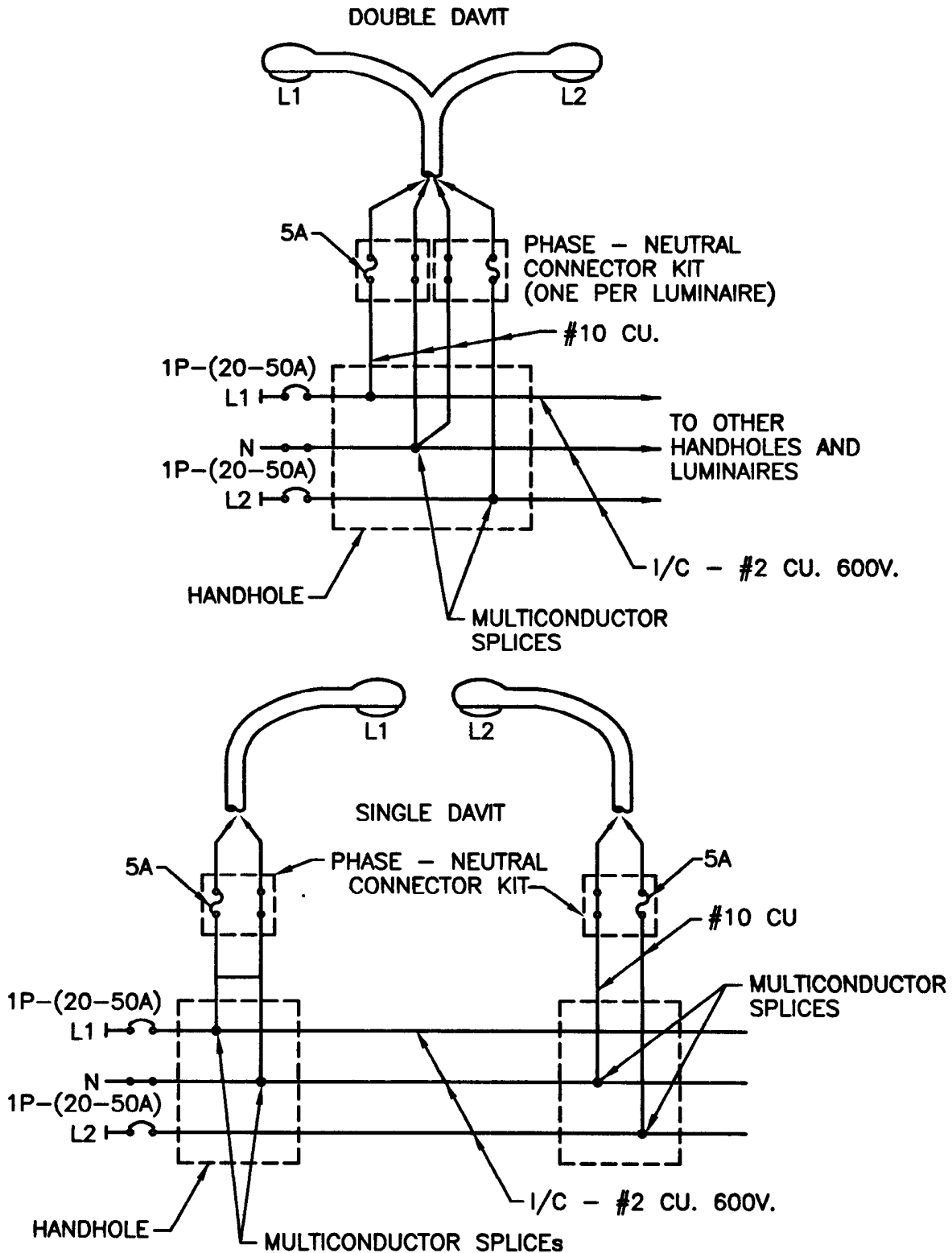
**ALUMINUM POLE – GROUNDING DETAIL**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### REVISIONS

NO.	BY	DATE

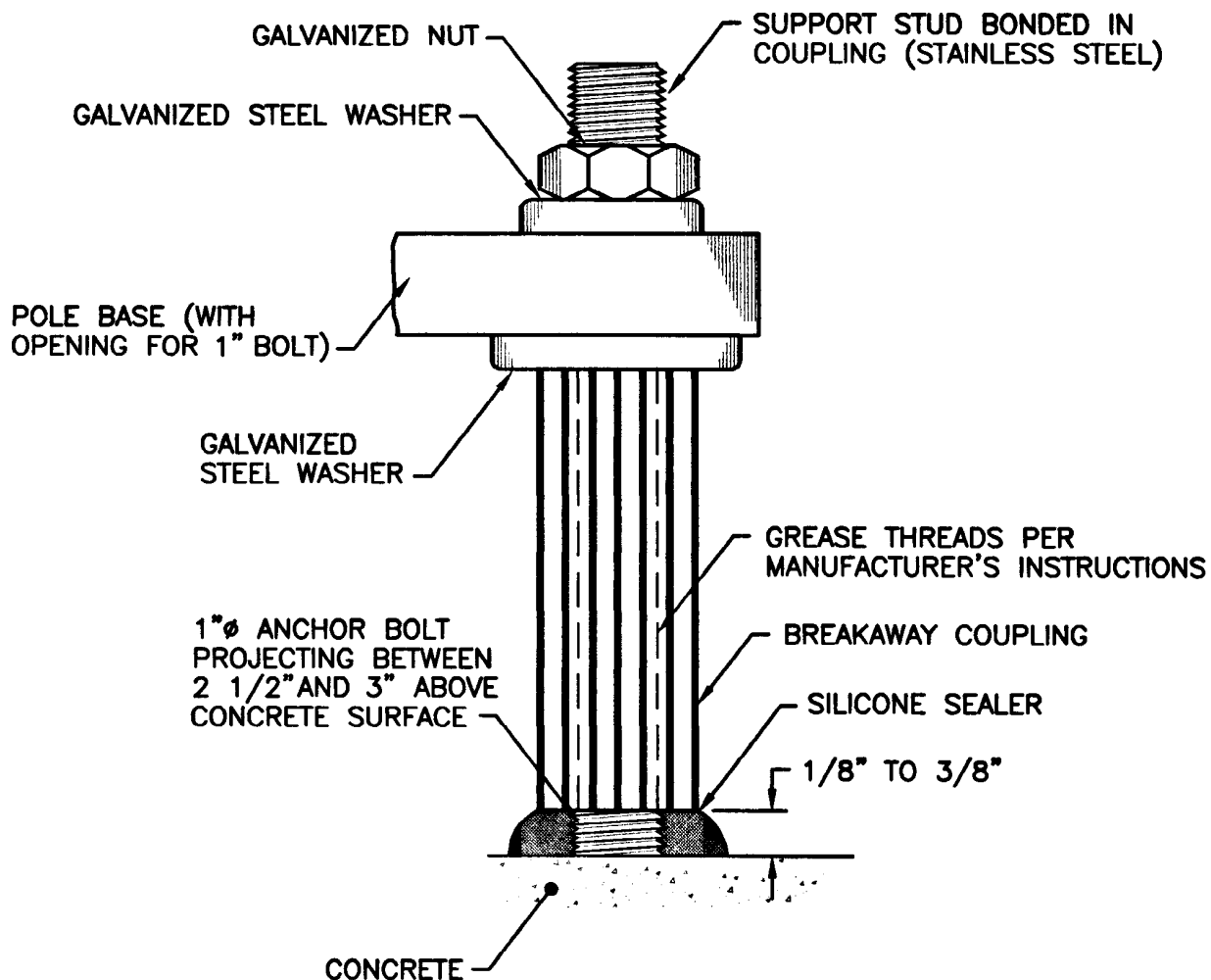
## TYPICAL LUMINAIRE - WIRING DIAGRAM

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



R.I.  
STANDARD  
18.3.2

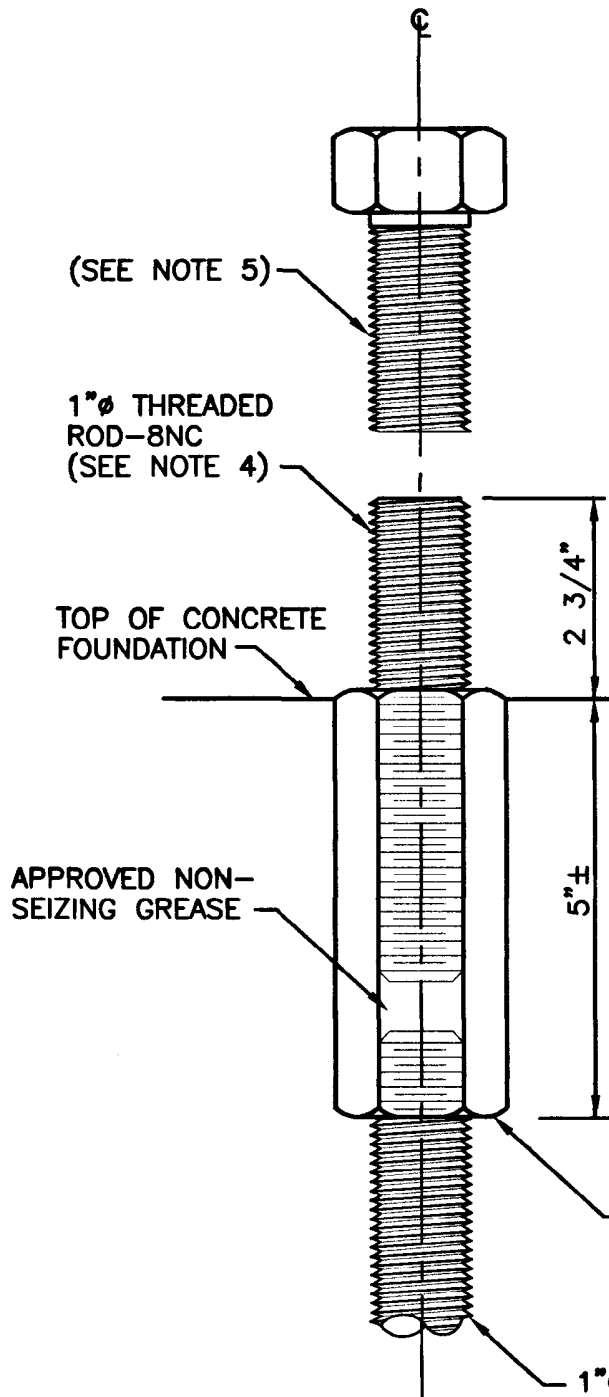


**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. STD. 18.3.5 TO BE USED WITH THIS STANDARD.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			BREAKAWAY SUPPORT COUPLINGS FOR LIGHT STANDARDS	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>18.3.4</b> </div>
NO.	BY	DATE		
			<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">   CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">   CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998  ISSUE DATE </div> </div>	



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.08 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD SHALL BE COORDINATED WITH STD. 18.1.0 AND 18.3.4.
3. THE HEXAGONAL COUPLINGS SHALL BE GALVANIZED AND SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"  $\phi$  ANCHOR BOLTS. THE BOLT LENGTH SHALL BE DETERMINED BY THE BOLT SUPPLIER AND SHALL MEET THE APPROVAL OF THE ENGINEER.
4. THE 1"  $\phi$  STAINLESS STEEL THREADED RODS SHALL BE USED WHEN STD. 18.3.4 BREAKAWAY COUPLINGS ARE SPECIFIED. THEY SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"  $\phi$  ANCHOR BOLTS. THEY SHALL BE BONDED TO THE STD. 18.3.4 COUPLINGS WITH A BONDING MATERIAL APPROVED BY THE BREAKAWAY COUPLING MANUFACTURER.
5. WHEN STD. 18.3.4 COUPLINGS ARE NOT SPECIFIED, GALVANIZED OR STAINLESS STEEL HEX BOLTS SHALL BE USED INSTEAD OF THREADED RODS. THEY SHALL BE ABLE TO DEVELOP THE STRENGTH OF THE 1"  $\phi$  ANCHOR BOLTS.
6. APPROVED PLUGS SHALL BE INSERTED INTO THE HEX COUPLINGS DURING CONSTRUCTION OF THE FOUNDATION.

1"  $\phi$  GALVANIZED HEX COUPLING  
(SEE NOTE 3)

1"  $\phi$  GALVANIZED ANCHOR BOLTS, 5'-6" LONG,  
55,000 PSI. MINIMUM YIELD, 8NC BOLT THREADS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**RECESSED BOLT COUPLINGS  
FOR LIGHT STANDARDS**

REVISIONS		
NO.	BY	DATE

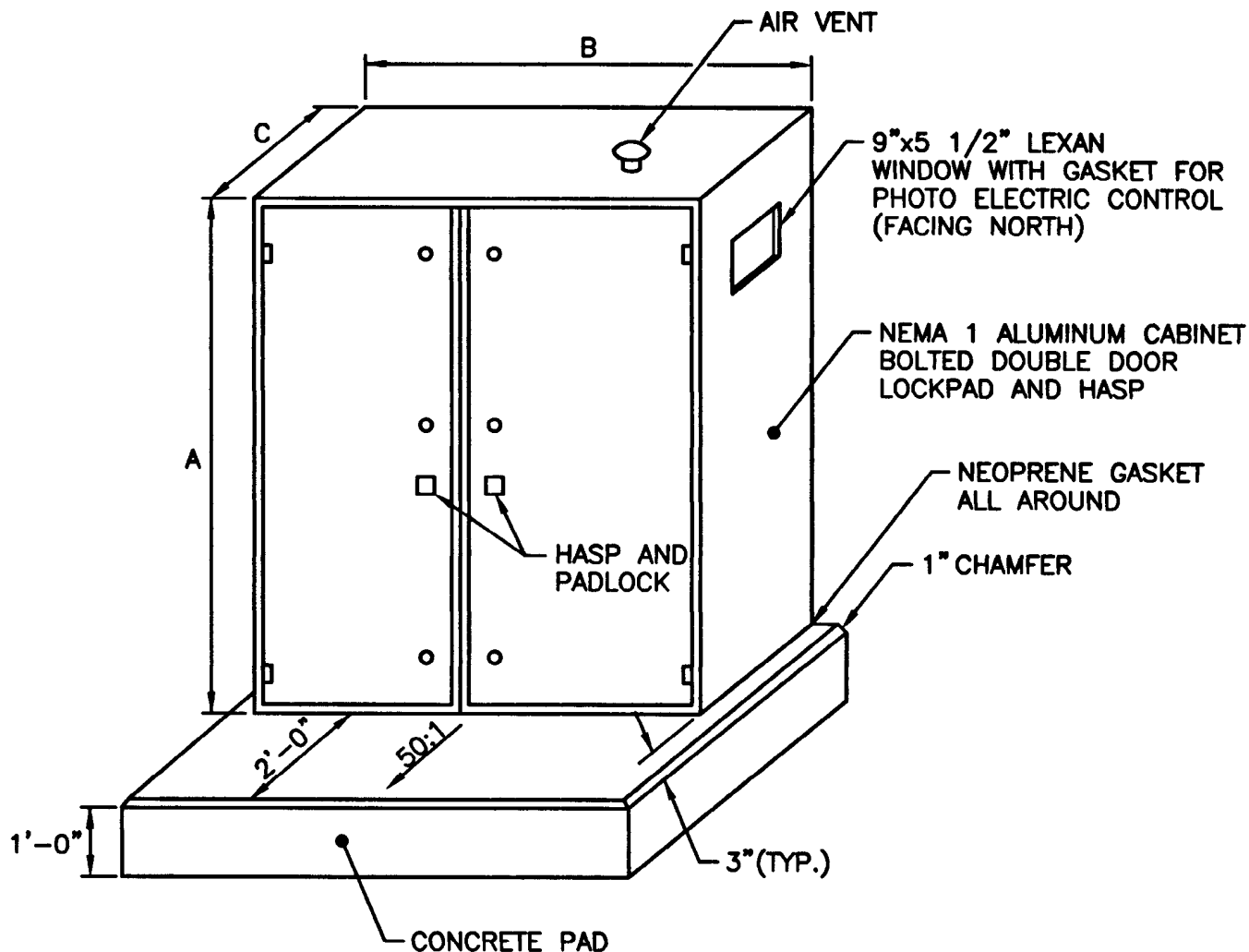
*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE









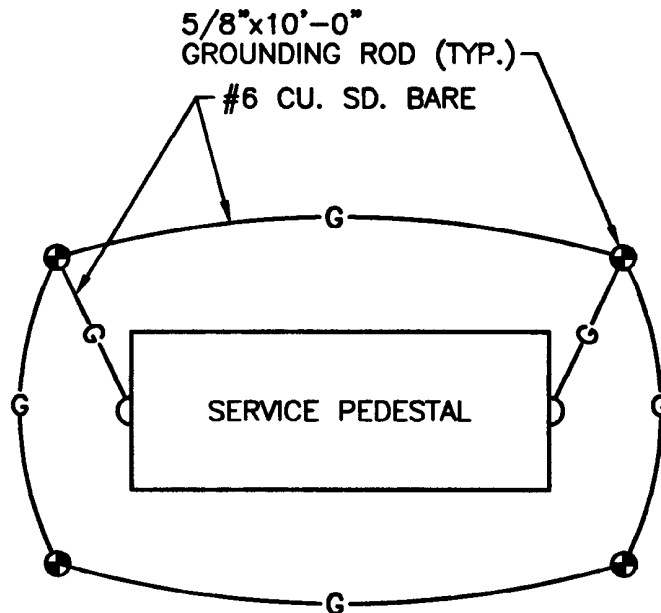
CABINET DIMENSIONS	A	B	C
120/240 OR 120/208 VOLT	4'-0" TO 4'-4"	3'-6" TO 4'-2"	1'-2" TO 2'-0"
240/480 VOLT	4'-0" TO 6'-0"	3'-6" TO 5'-0"	2'-0"

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. PEDESTAL SHOULD BE LOCATED A MINIMUM OF 30'-0" FROM EDGE OF TRAVEL LANE OR BEHIND A BARRIER OR GUARDRAIL IF LESS THAN 30'-0".

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			SERVICE PEDESTAL		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>18.4.0</b> </div>	
NO.	BY	DATE				
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION		JUNE 15, 1998 ISSUE DATE



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. #6 CU. BARE GROUND WIRE 1'-0" BELOW GRADE. ALLOW 3'-0" SLACK LEADS TO BOND AT GROUNDING LUGS IN CABINET.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

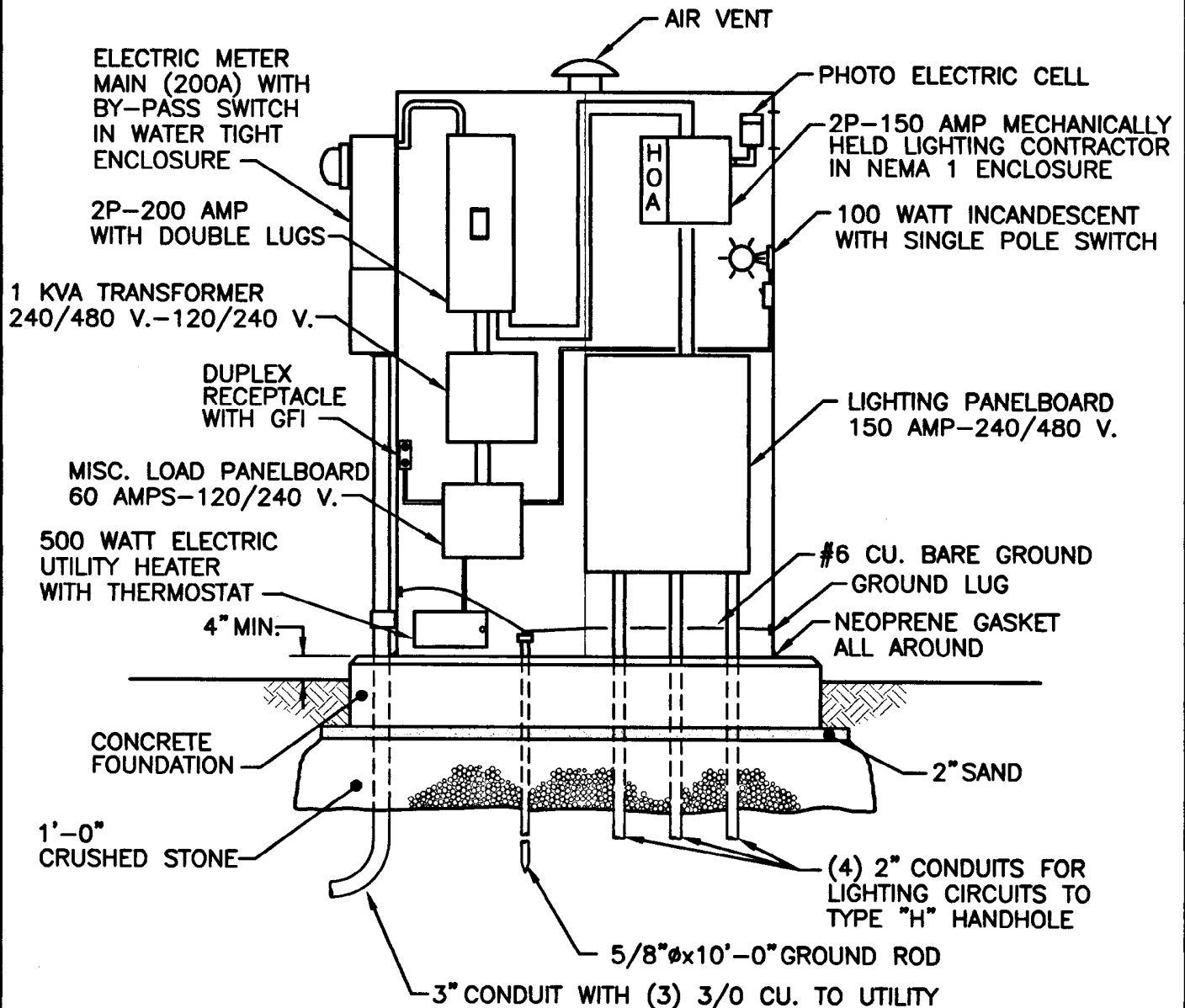
**SERVICE PEDESTAL – GROUNDING DETAIL**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





### SWITCHGEAR DETAIL FRONT VIEW

**NOTE:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. APPROXIMATE DIMENSION 6'-0" (MAX.) x 4'-0" x 1'-6" TO 2'-0" (MAX.)

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

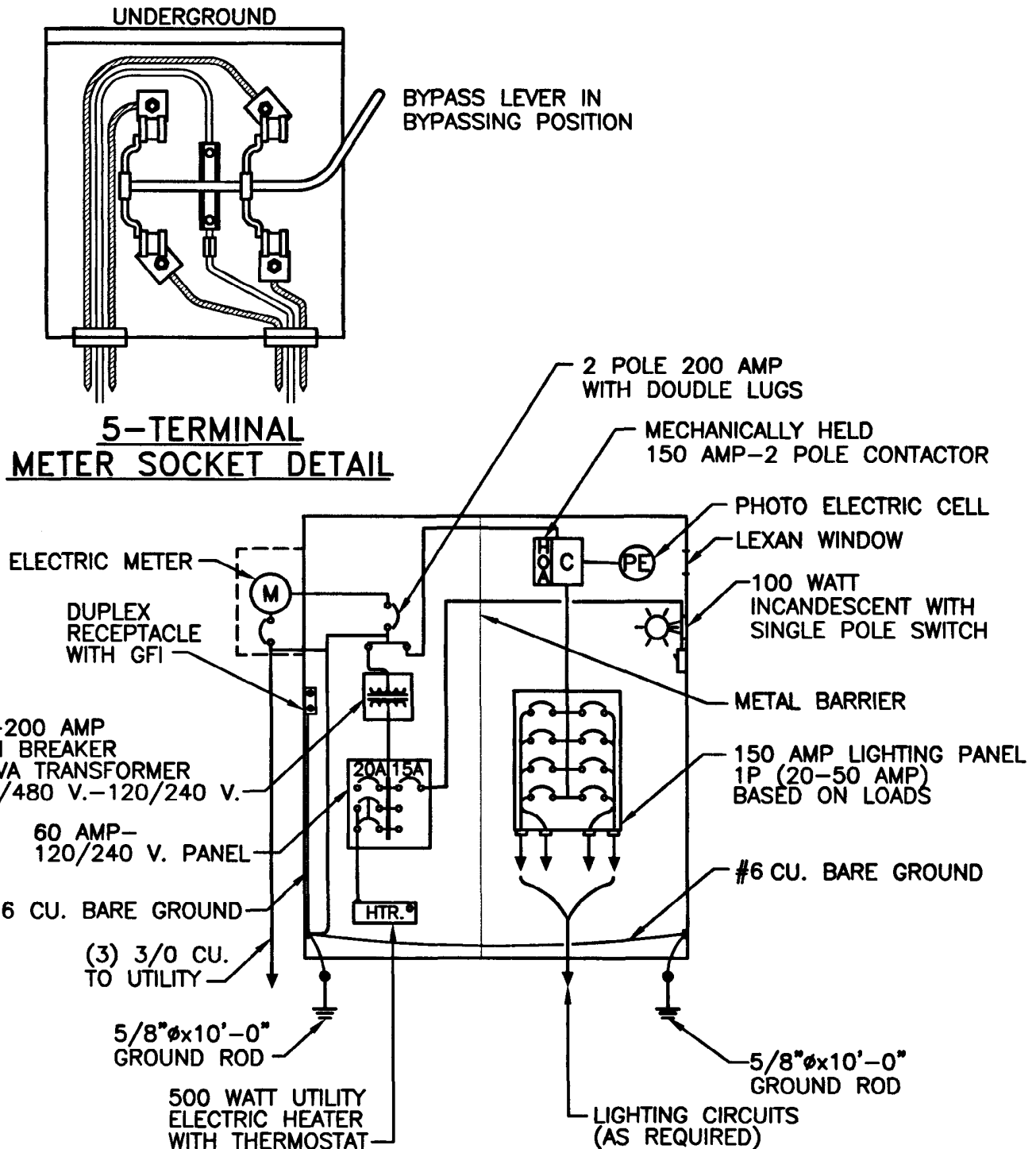
### SERVICE PEDESTAL 240/480 VOLTS - 3W

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





### POWER SCHEMATIC

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. ON THREE-WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDED.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

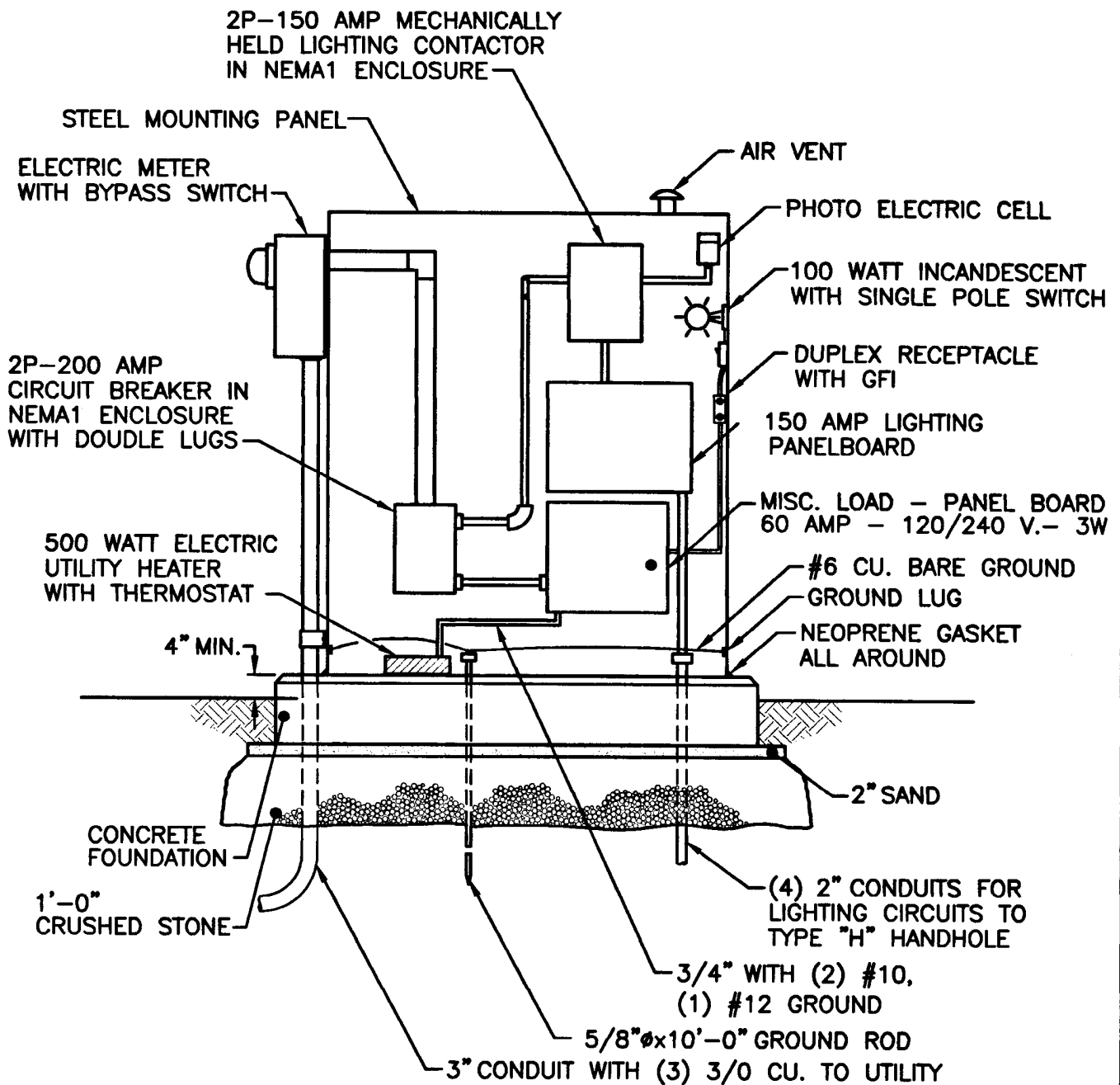
### SERVICE PEDESTAL 240/480 VOLTS - 3W

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





### SWITCHGEAR DETAIL FRONT VIEW

**NOTES:**

SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

## SERVICE PEDESTAL 120/240 OR 120/208 VOLTS - 3W

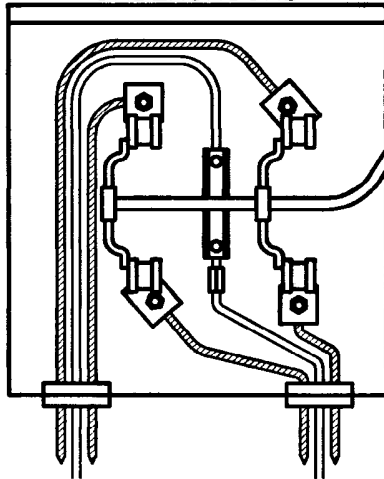
*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

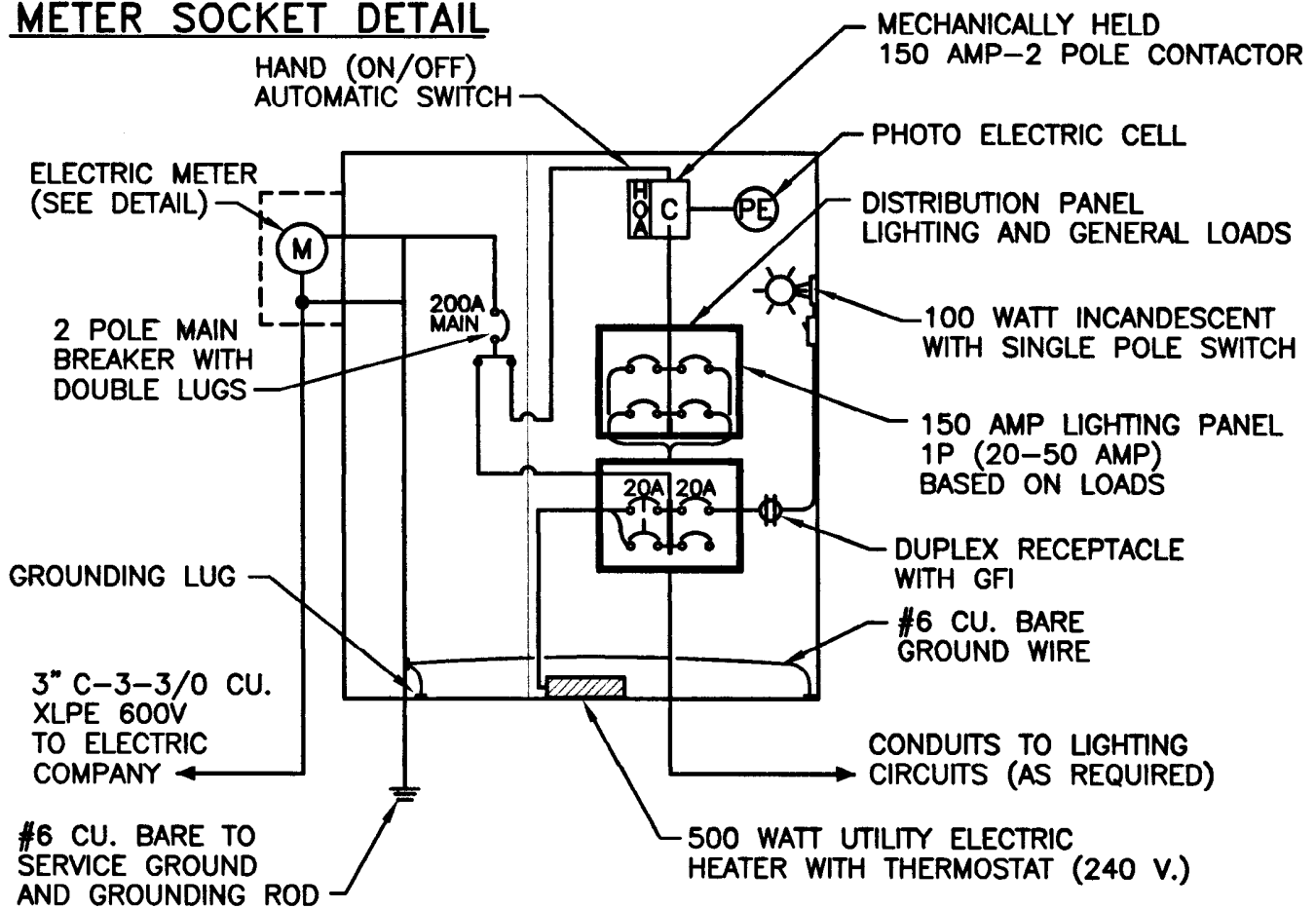


# UNDERGROUND



BYPASS LEVER IN BYPASSING POSITION

## 5-TERMINAL METER SOCKET DETAIL



## POWER SCHEMATIC

### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.09 OF THE R.I. STANDARD SPECIFICATIONS.
2. ON THREE-WIRE INSTALLATIONS, TERMINAL AND JAW AT "B" MUST BE GROUNDED.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

### SERVICE PEDESTAL

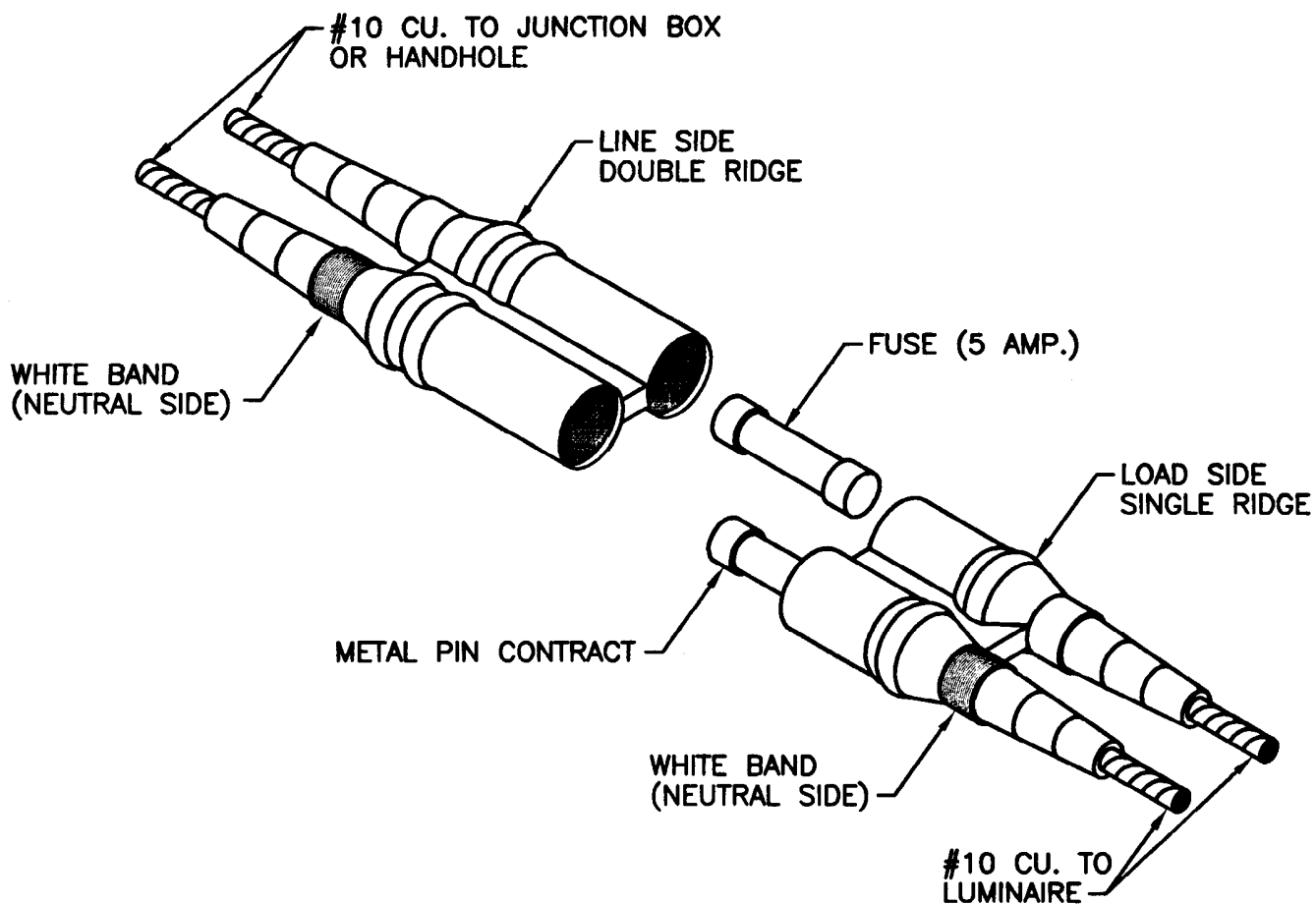
## 120/240 OR 120/208 VOLTS - 3W

CHIEF ENGINEER  
 TRANSPORTATION

CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. LOCATED IN HANDHOLE AT BASE OF ALUMINUM POLE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

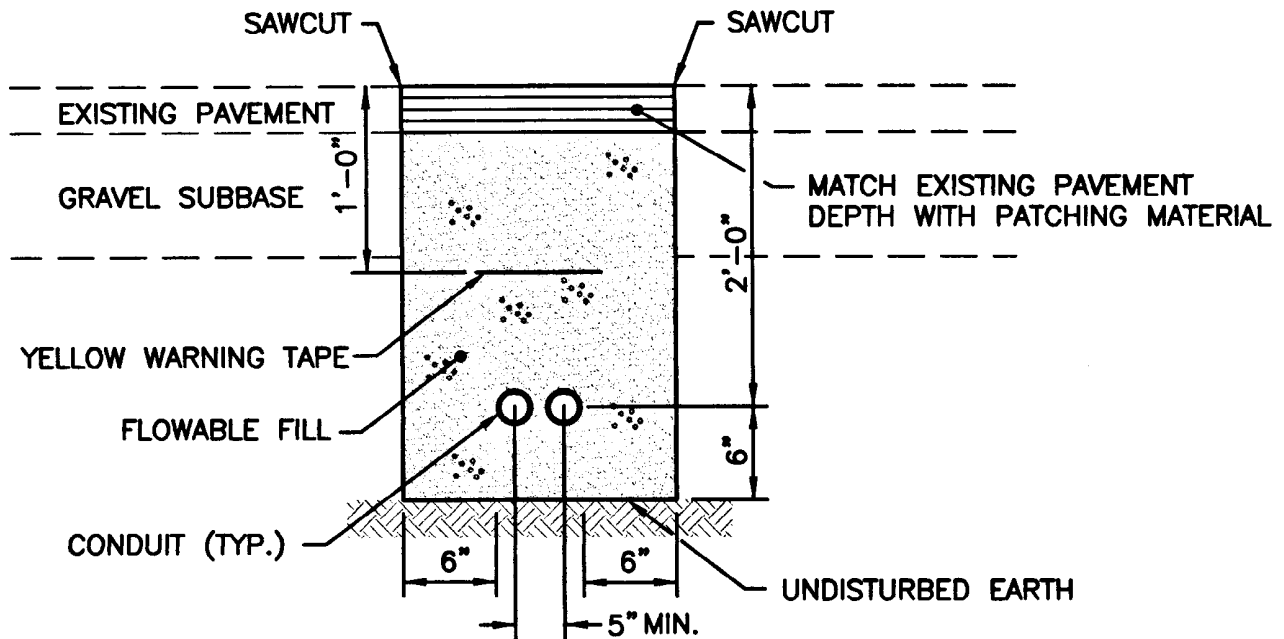
**PHASE-NEUTRAL CONNECTOR KIT**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

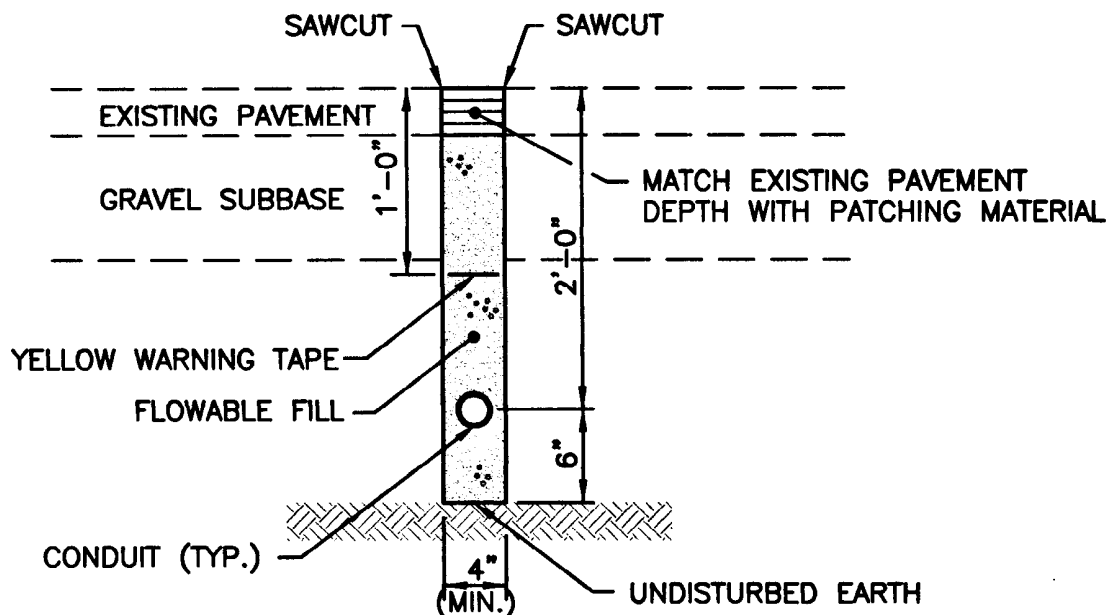
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





### STANDARD TRENCH DETAIL



### AUTOMATIC TRENCHING MACHINE DETAIL

**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

## TRENCH DETAIL FOR CONDUIT IN EXISTING ROADWAY

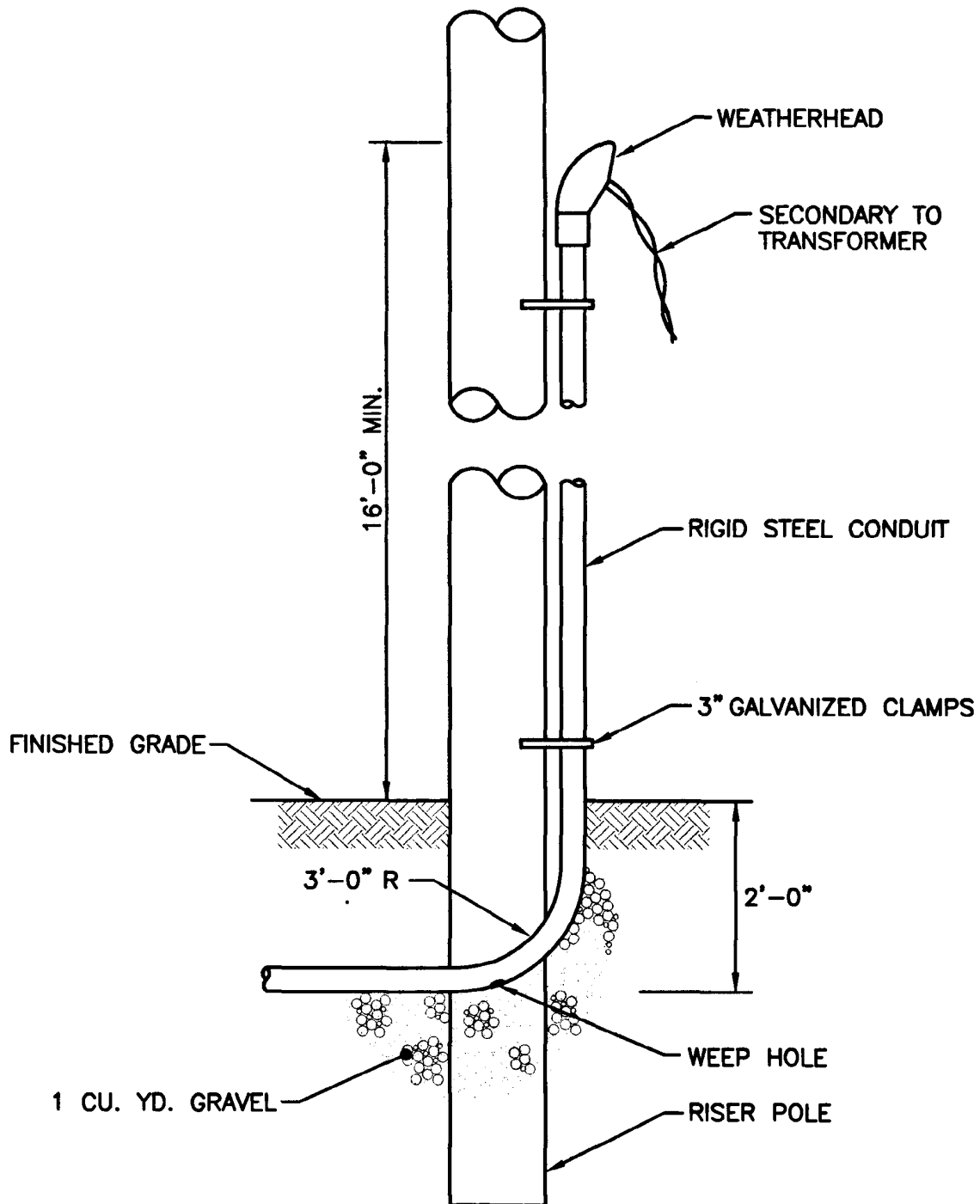
*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION T.06 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

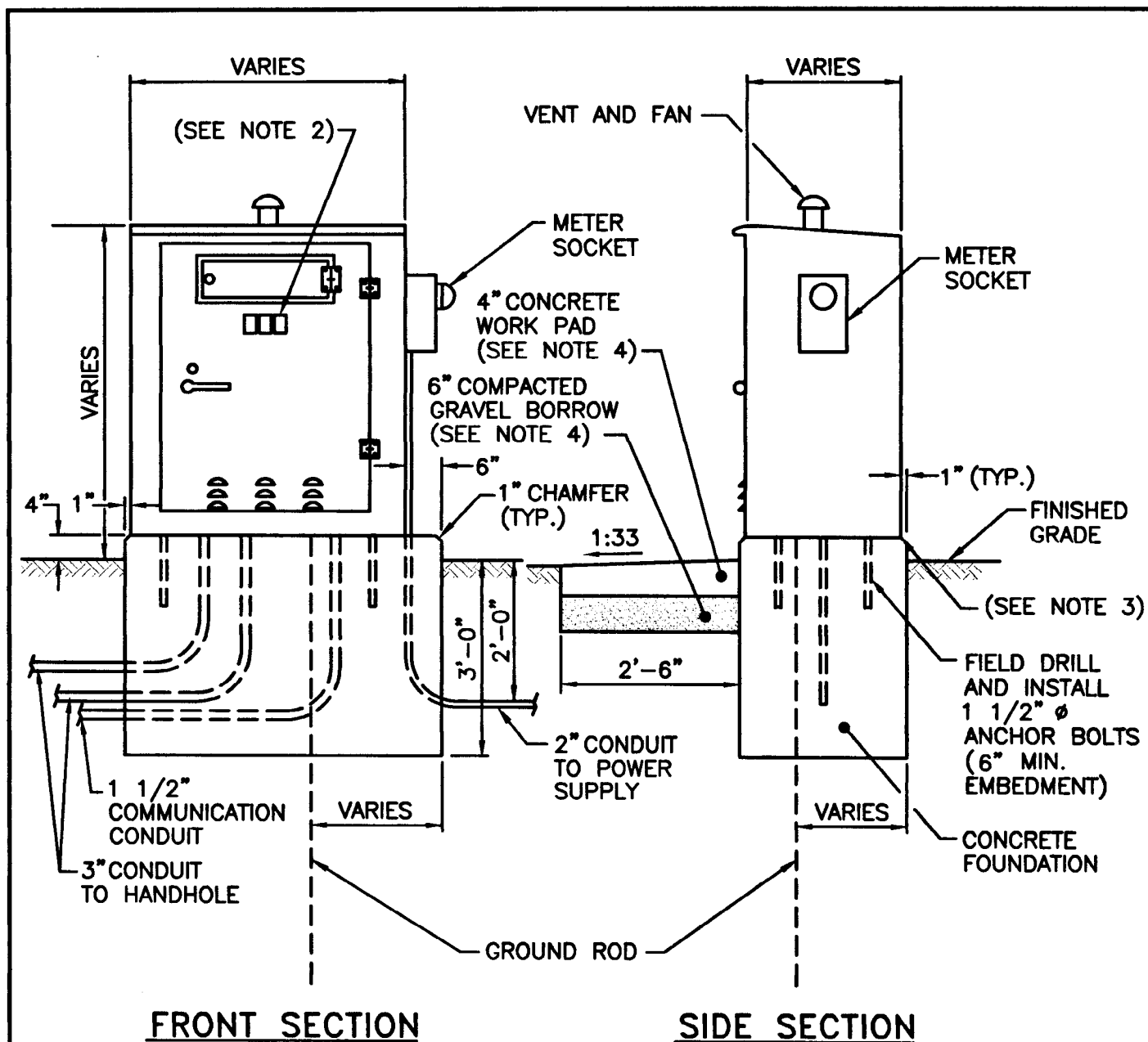
**RISER POLE DETAIL**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD SPECIFICATION.
2. TRAFFIC SIGNAL NUMBER TO BE STENCILED ON EXTERIOR AND INTERIOR OF ALL CABINET DOORS (GROUND AND POLE MOUNTED). STENCIL SHALL BE 3" HIGH BLOCK LETTERS APPLIED WITH BLACK PAINT.
3. SILICONE CAULKING TO BE APPLIED BETWEEN CABINET AND FOUNDATION TO PROVIDE A PERMANENT WEATHER TIGHT SEAL.
4. IN UNPAVED AREAS A 4'-0"x2'-6" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE CABINET DOOR. PAD AND FOUNDATION SHALL BE COMPLETED IN ONE POUR.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

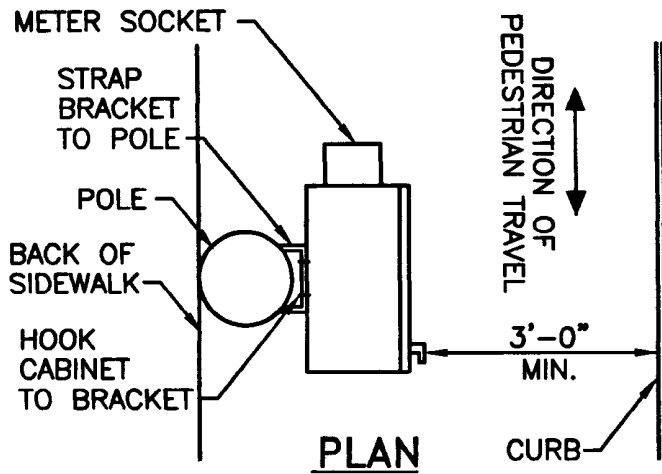
**GROUND MOUNTED  
CONTROLLER INSTALLATION**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

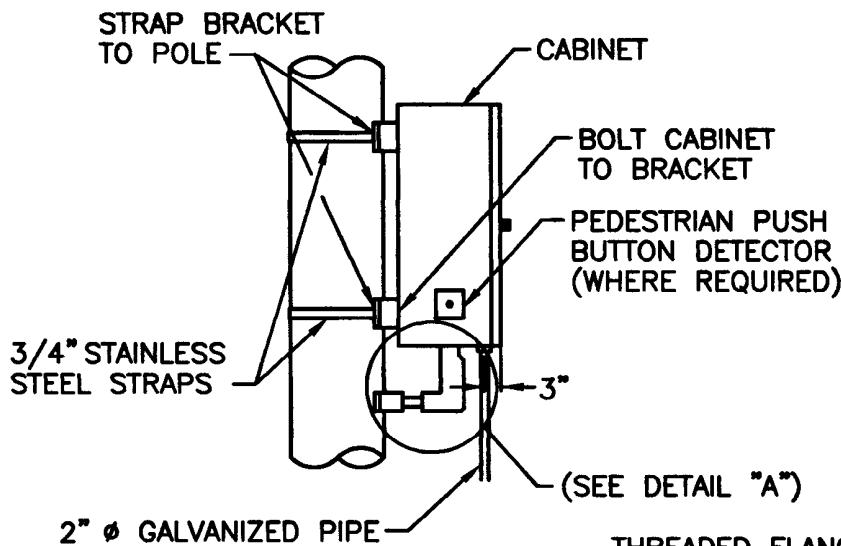
**JUNE 15, 1998**  
ISSUE DATE



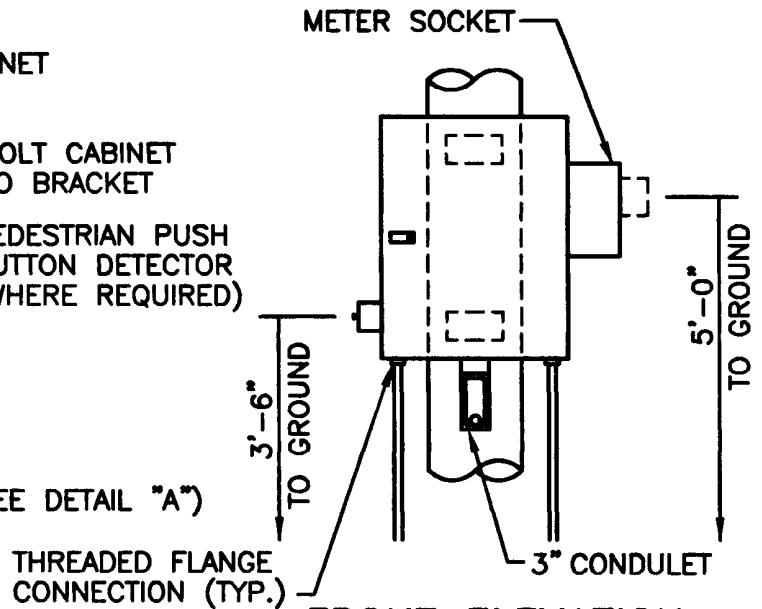


**NOTES:**

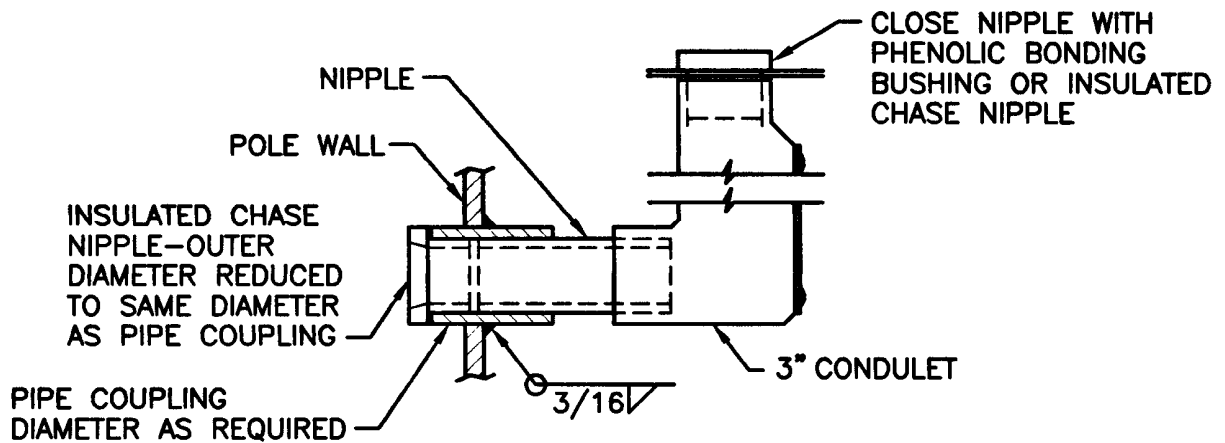
1. SHALL BE IN ACCORDANCE WITH SECTION T.12 OF THE R.I. STANDARD DETAILS.
2. THE CABINET SHALL BE MOUNTED SO THAT HOLES IN THE POLE FOR WIRE ACCESS FITTINGS ARE AT 90° TO THE AXIS OF POLE LOAD.
3. LOCATE BRACKETS AND ATTACHING BOLTS TO CLEAR EQUIPMENT WITHIN CABINET.
4. IN UNPAVED AREAS, A 4'-0"x2'-6"x4" PAVED WORK PAD SHALL BE PLACED IN FRONT OF THE DOOR.
5. ALL HARDWARE SHALL BE STAINLESS STEEL.
6. LINE CONDUCTORS SHALL BE PROTECTED TO THE METER.



**SIDE ELEVATION**



**FRONT ELEVATION**



**DETAIL "A"**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**POLE MOUNTED  
CONTROLLER INSTALLATION**

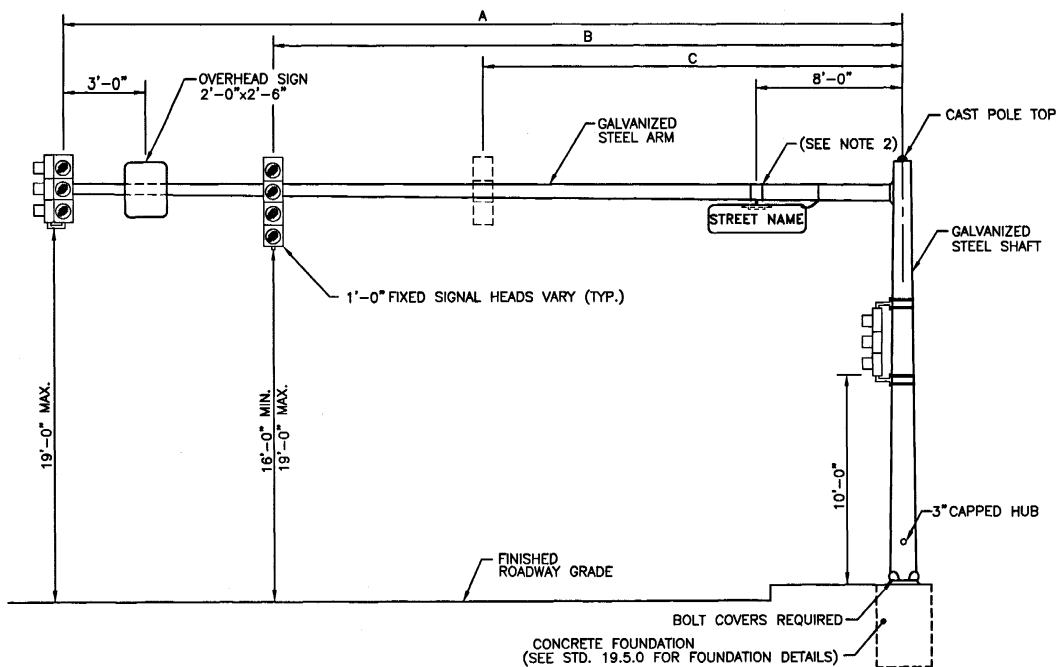
REVISIONS		
NO.	BY	DATE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
  2. MOUNTING BRACKET FOR THE SIGNAL SHALL BE WITH STAINLESS STEEL BANDS. MUST BE ADJUSTABLE TO HOLD THE SIGNAL RIGIDLY IN PLACE AND RESIST MOVEMENT IN ALL DIRECTIONS.
  3. ALL SIGNALS SHOULD INCLUDE 5" BACKPLATES FOR DESIGN PURPOSES.
  4. ALL STREET SIGNS ARE 1'-6" HIGH BY 6'-0" LONG.
  5. DOOR FACE AND VISORS SHALL BE PAINTED FLAT BLACK.
  6. SIGNAL HEADS SHALL BE PLACED ON THE MAST ARM SO THAT THE RED LENSES ARE AT EQUAL HEIGHT ABOVE THE PAVEMENT SURFACE.

MAST ARM TYPE	DIMENSION A (FT.)	SIGNAL CONFIGURATION A	SIGNAL WEIGHT/AREA	DIMENSION B (FT.)	SIGNAL CONFIGURATION B	SIGNAL WEIGHT/AREA	DIMENSION C (FT.)	SIGNAL CONFIGURATION C	SIGNAL WEIGHT/AREA	FOUNDATION NO.
RI-20	20	1 WAY/3 SEC	74 LB./8.5 S.F.	12	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-50
RI-25	25	2 WAY/4 SEC	175 LB./17.3 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-60
RI-30	30	2 WAY/4 SEC	175 LB./17.3 S.F.	20	2 WAY/3 SEC	158 LB./13.3 S.F.	N/A	N/A	N/A	F-70
RI-35	35	2 WAY/4 SEC	175 LB./17.3 S.F.	25	1 WAY/3 SEC	74 LB./8.5 S.F.	N/A	N/A	N/A	F-70
RI-40	40	3 WAY/3 SEC	202 LB./18.1 S.F.	30	2 WAY/3 SEC	158 LB./13.3 S.F.	20	1 WAY/3 SEC	74 LB./8.5 S.F.	F-90
RI-45	45	3 WAY/4 SEC	255 LB./23.7 S.F.	30	1 WAY/3 SEC	74 LB./8.5 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	F-90
RI-50	50	3 WAY/4 SEC	255 LB./23.7 S.F.	30	1 WAY/4 SEC	90 LB./10.8 S.F.	15	1 WAY/3 SEC	74 LB./8.5 S.F.	F-100

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL MAST ARM

REVISIONS

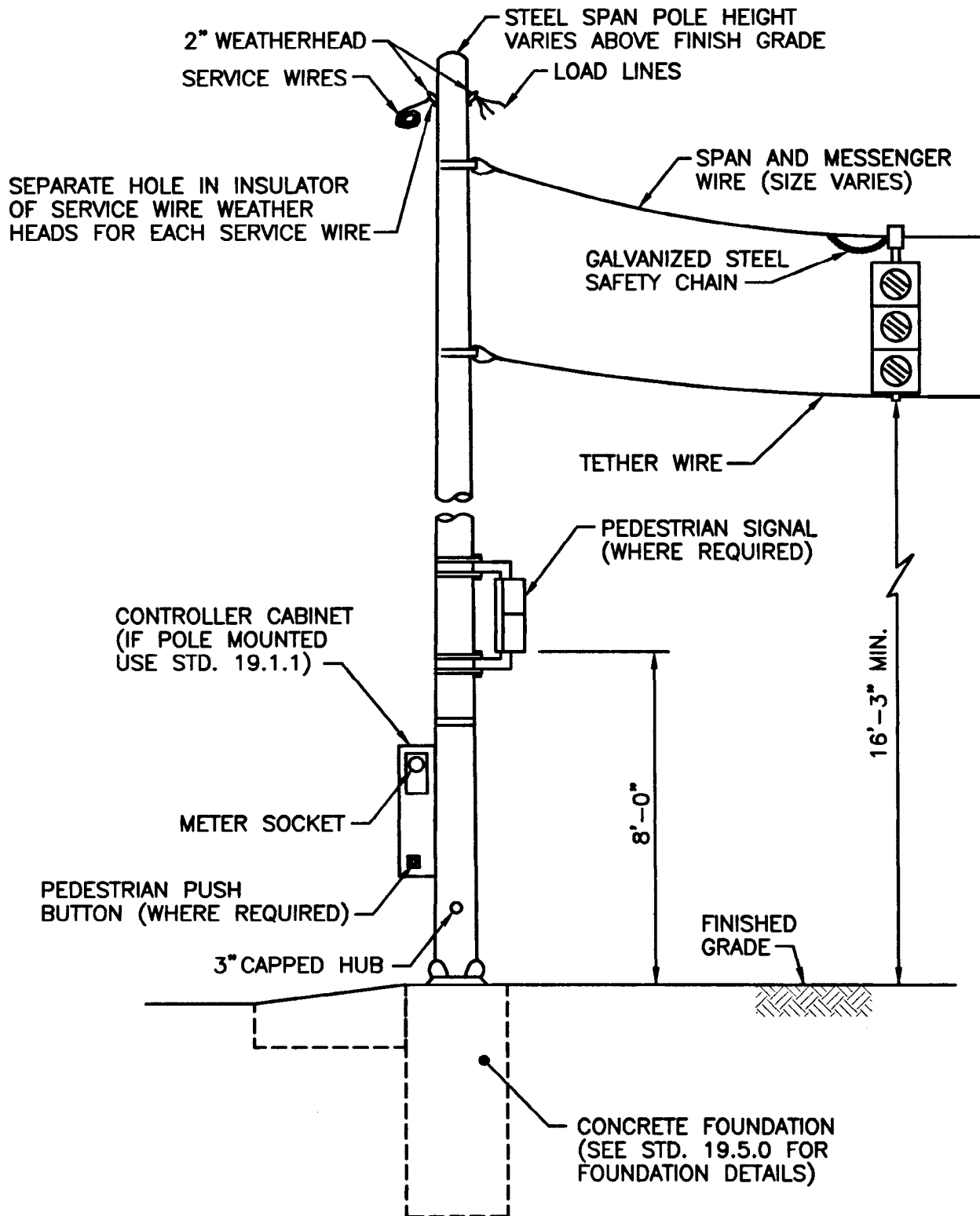
NO. BY DATE

R.I. STANDARD 19.2.0

JUNE 15, 1998  
ISSUE DATE

THOMAS J. GARDNER  
ENGINEER

THOMAS J. GARDNER  
ENGINEER



**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

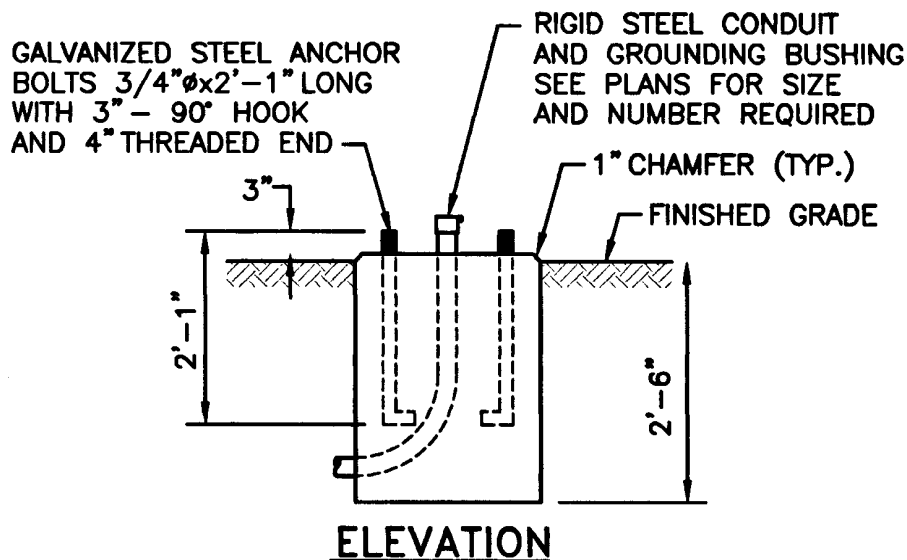
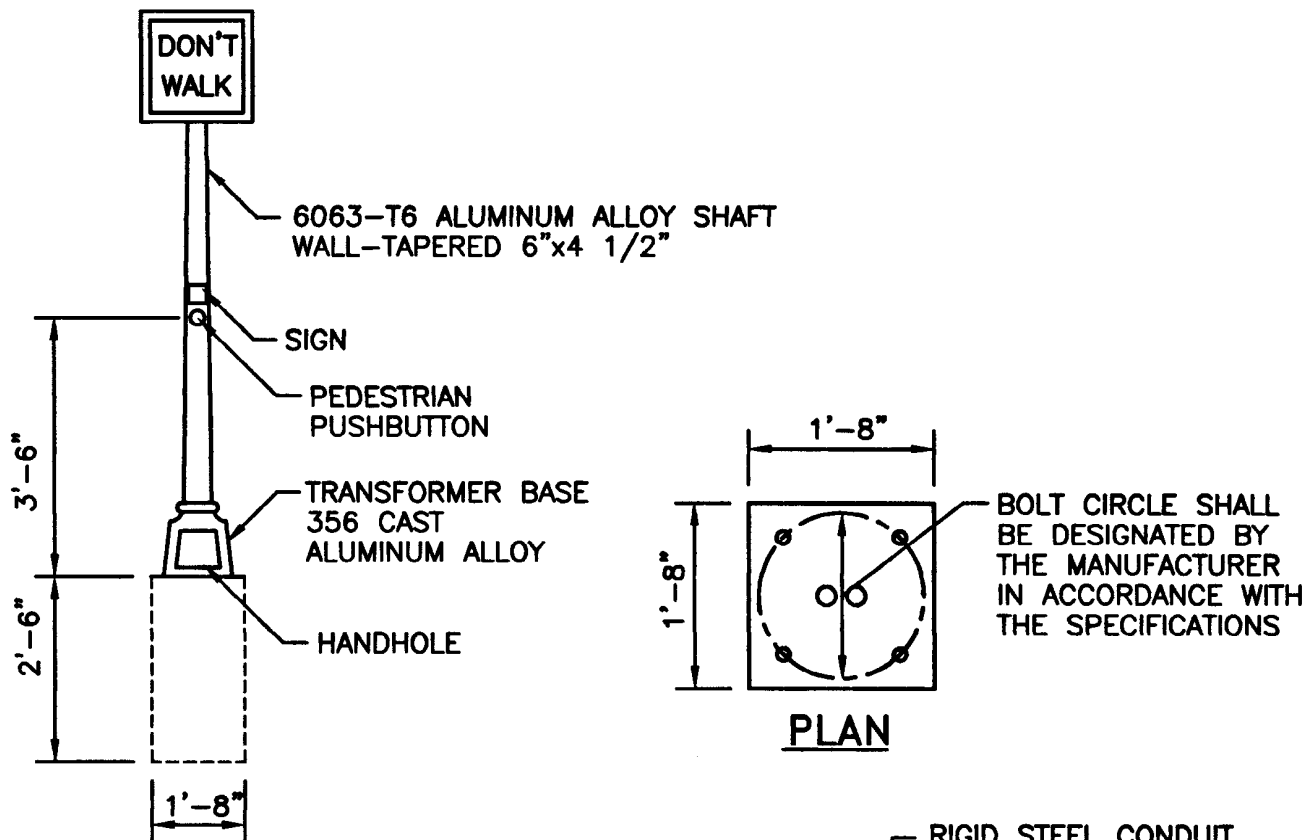
### STEEL SPAN POLE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

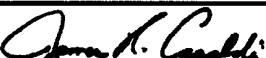



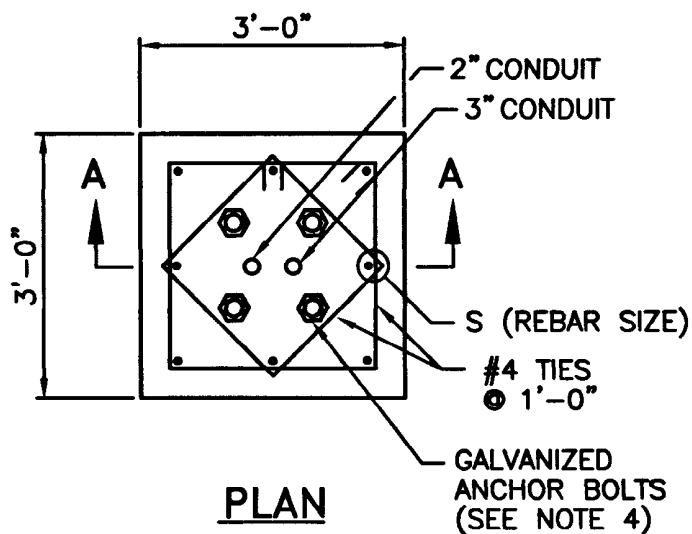


**NOTES:**

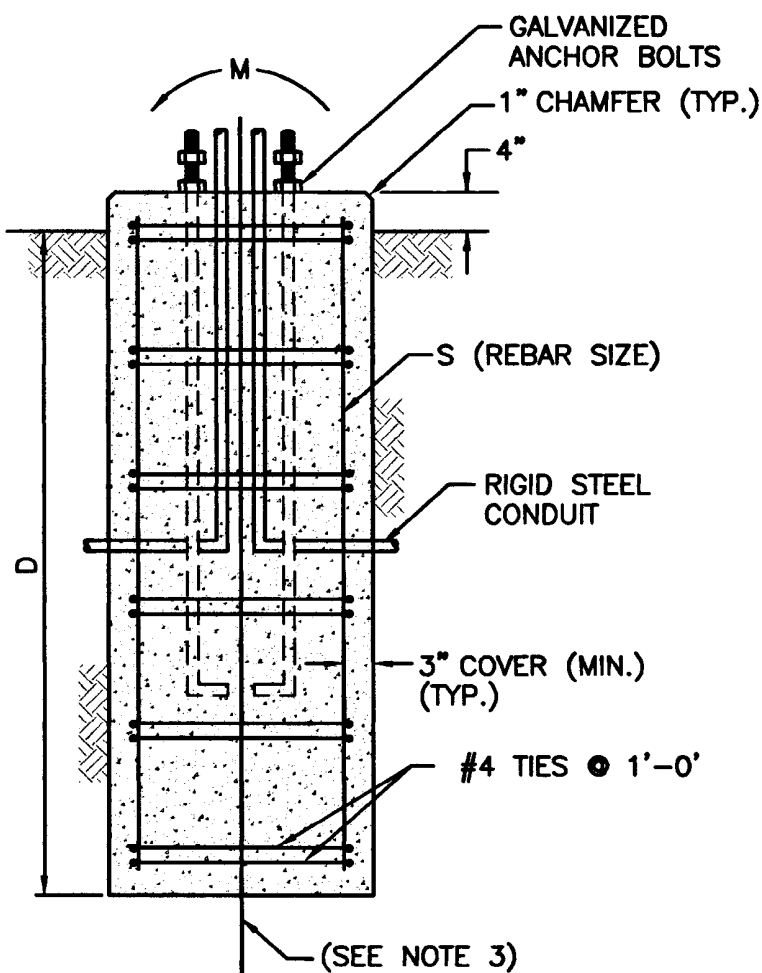
1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. PRECAST CONCRETE FOUNDATIONS MAY BE PROVIDED AS AN ALTERNATE TO CAST IN-PLACE FOUNDATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			ALUMINUM PEDESTAL	<div><div>R.I. STANDARD 19.4.0</div></div>
NO.	BY	DATE		
			<div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div>	



FOUNDATION NO.	FOUNDATION DIMENSIONS		
	M (FT. K.)	D	S
F-40	0 TO 40	6'-6"	8-#5
F-50	50	7'-0"	8-#6
F-60	60	7'-6"	8-#7
F-70	70	8'-0"	8-#7
F-80	80	9'-0"	8-#7
F-90	90	9'-6"	8-#8
F-100	100	10'-0"	8-#8
F-110	110	10'-6"	12-#8
F-120	120	11'-0"	12-#8



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. M (MOMENT AT BASE) TO BE FURNISHED BY MAST ARM FABRICATOR.
3. GROUND ROD 5/8"  $\phi$  x 10'-0" LONG, IF CONTROLLER IS POLE MOUNTED.
4. ANCHOR BOLT LENGTH AS REQUIRED TO DEVELOP THE CALCULATED BOLT TENSION.
5. CAST FOUNDATIONS AGAINST UNDISTURBED SOIL.
6. DESIGN SOIL PRESSURE = 1250 PSF.
7. REFERENCE STD. 19.2.0 AND 19.3.0.
8. BOLT TEMPLATE AND WOOD FORMS SHALL BE REMOVED PRIOR TO BACKFILLING.
9. M (MOMENT AT BASE) MAY BE REDUCED (DIVIDED BY 1.4) FOR LOADING COMBINATIONS CONTAINING WIND.
10. NO FOUNDATIONS TO BE PLACED IN CLAY, SILT OR MUCK.
11. PRIOR TO THE INSTALLATION OF POLE THE FOUNDATION SHALL BE MARKED BY A TRAFFIC CONE, DOUBLE NUTTED TO THE ANCHOR BOLTS.
12. FOUNDATION DESIGN IS BASED ON WELL GRADED GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

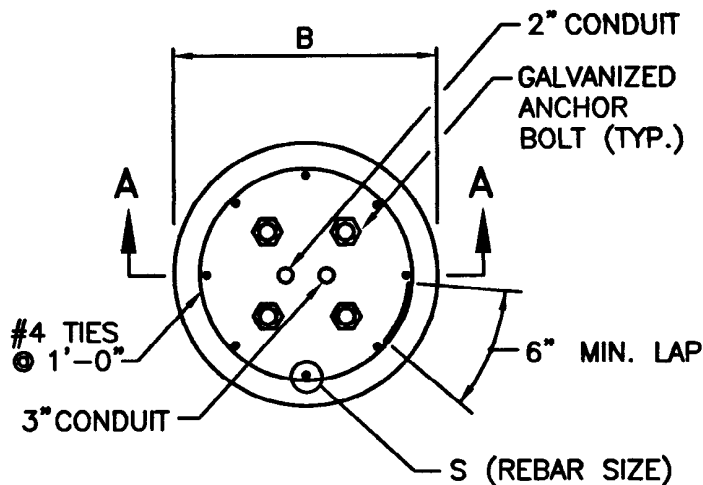
**MAST ARM AND  
SPAN POLE FOUNDATION**

*John A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

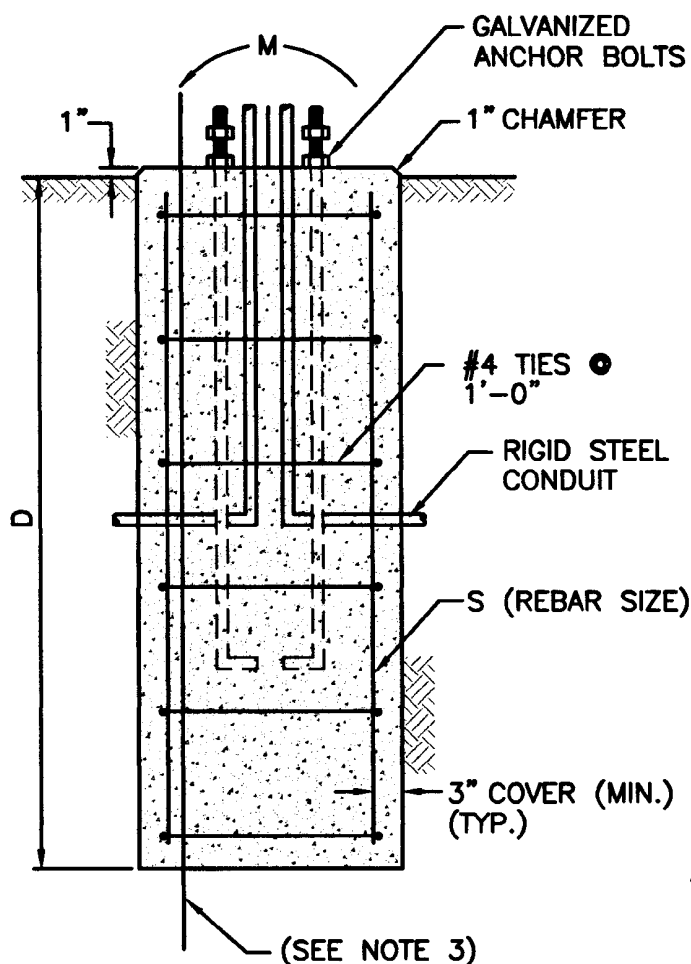
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
**19.5.0**



**PLAN**



**SECTION A-A**

FOUNDATION DIMENSIONS			
M(FT. K.)	B	D	S
0 TO 30	2'-6"	6'-0"	8-#5
40	3'-0"	6'-6"	8-#5
50	3'-0"	7'-0"	8-#6
60	3'-0"	7'-6"	8-#7
70	3'-0"	8'-0"	8-#7
80	3'-0"	9'-0"	8-#7
90	3'-0"	9'-6"	8-#8
100	3'-0"	10'-0"	8-#8
110	3'-0"	10'-6"	12-#8
120	3'-0"	11'-0"	12-#8

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.11 OF THE R.I. STANDARD SPECIFICATIONS.
2. M (MOMENT AT BASE) TO BE FURNISHED BY SPAN POLE FABRICATOR.
3. GROUND ROD 5/8"  $\phi$  x 10'-0" LONG, IF CONTROLLER IS POLE MOUNTED.
4. CAST FOUNDATIONS AGAINST UNDISTURBED EARTH.
5. REFERENCE STD. 19.2.0.
6. NO FOUNDATIONS TO BE PLACED IN CLAY, SILT OR MUCK.
7. M (MOMENT AT BASE) MAY BE REDUCED (DIVIDED BY 1.4) FOR LOADING COMBINATIONS CONTAINING WIND.
8. DESIGN SOIL PRESSURE 1250 PSF.
9. PRIOR TO INSTALLATION OF THE POLES, THE FOUNDATION BOLTS SHALL BE MARKED BY A TRAFFIC CONE AND DOUBLE-NUTTED TO THE ANCHOR BOLT.
10. FOUNDATION DESIGN IS BASED ON WELL GRADED GRANULAR SOIL CONDITIONS. A SPECIAL DESIGN IS REQUIRED IF FIELD CONDITIONS VARY FROM THIS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**ORNAMENTAL MAST ARM FOUNDATION**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





AS SPECIFIED ON PLANS OR AS DIRECTED BY THE ENGINEER

PAYMENT FOR CONDUIT INSTALLATION AND PAVEMENT CUTOUTS TO BE INCLUDED IN INDUCTANCE LOOP INSTALLATION

HANDHOLE AS SPECIFIED ON PLANS. SEE STANDARD SHEETS FOR HANDHOLE INSTALLATION DETAILS

SPLICE (SEE DETAIL "E")

SHIELDED LEAD IN CONDUIT AS SPECIFIED ON PLANS (SEE DETAIL "D")

1" MIN. RIGID OF FLEXIBLE LIQUID TIGHT CONDUIT

SHOULDER OR SIDEWALK

(SEE DETAIL "C")

LOOP WIRES TO BE TWISTED 2 TURNS/FT. OR AS DIRECTED BY THE ENGINEER

(SEE DETAIL "A")

SAWCUT

PAVEMENT EDGE OR CURB

PAVEMENT JOINT

PAVEMENT JOINT

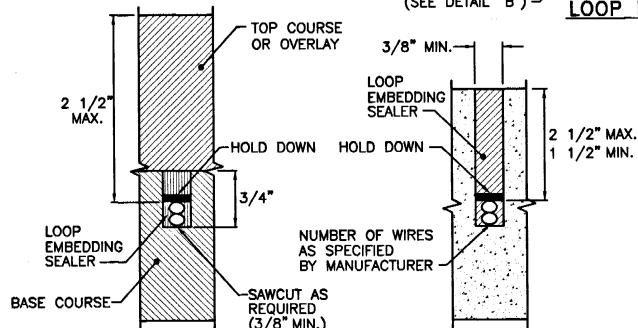
PAVEMENT JOINT

2'-0" MIN. (SEE DETAIL "B")

4'-0" MIN.

4'-0" MIN.

### LOOP INSTALLATION DETAIL

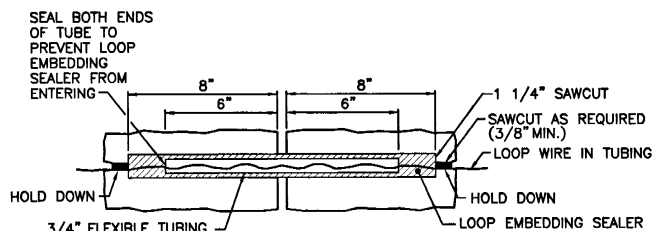


### SAWCUT CROSS SECTION IN ASPHALT WHERE AN OVERLAY IS BEING PLACED

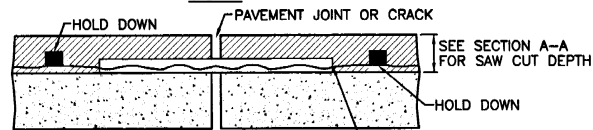
### SECTION A-A

NOTE: USE SHORT (2" TYP.) PIECE OF OPEN CELLED POLYURETHANE BACKER ROD FOAM SEALER STRIPS AT 2'-0" CENTERS TO HOLD LOOP WIRES IN PLACE UNTIL SEALER SETS. DO NOT USE SHARP OBJECTS TO HOLD WIRE DOWN.

### SAWCUT CROSS SECTION IN CONCRETE OR ASPHALT



### PLAN



### SIDE ELEVATION

### DETAIL "A"

### CROSSING PAVEMENT JOINTS OR CRACKS

SHEET 1 OF 2

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### INDUCTANCE LOOP VEHICLE DETECTOR INSTALLATION DETAILS

JUNE 15, 1998  
ISSUE DATE

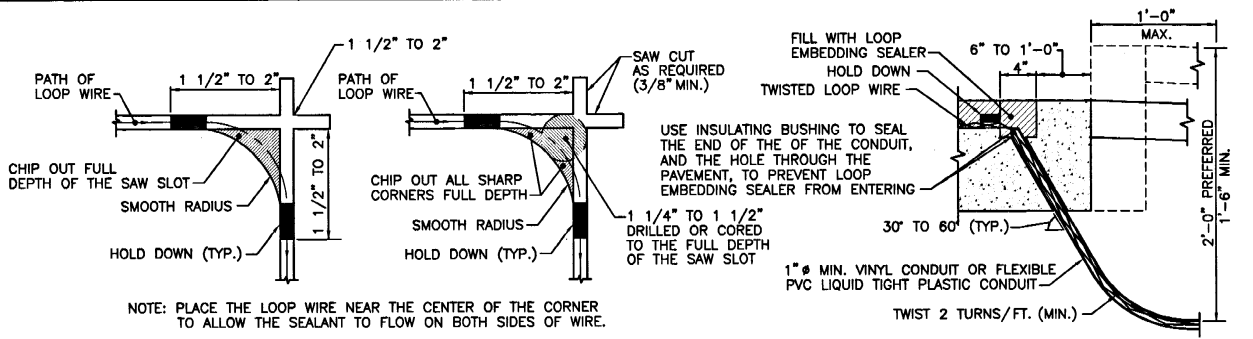
ENGINEER  
SUPERVISOR  
DESIGNER

DESIGNED BY  
CHECKED BY  
APPROVED BY

REV/SIONS

NO. BY DATE

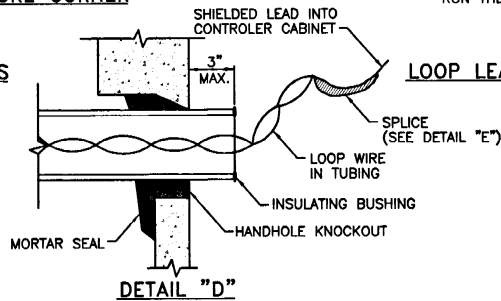
R.I. STANDARD  
19.6.0A



**CHIP OUT CORNER**

**CORE CORNER**

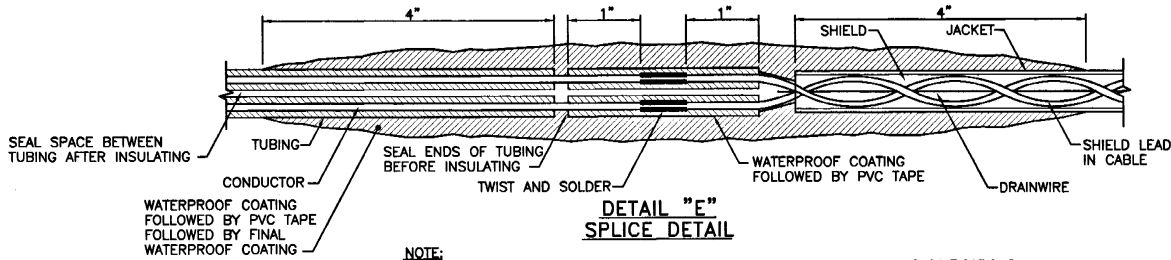
**DETAIL "B" CORNER DETAILS**



NOTE: CURB DETAIL IS SHOWN BY THE DASHED LINES. RUN THE CONDUIT UNDER THE CURB.

**SIDE ELEVATION**

**DETAIL "C" LOOP LEAD IN AT PAVEMENT EDGE**



NOTE: SHALL BE IN ACCORDANCE WITH SECTION T.13 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

INDUCTANCE LOOP VEHICLE DETECTOR INSTALLATION DETAILS

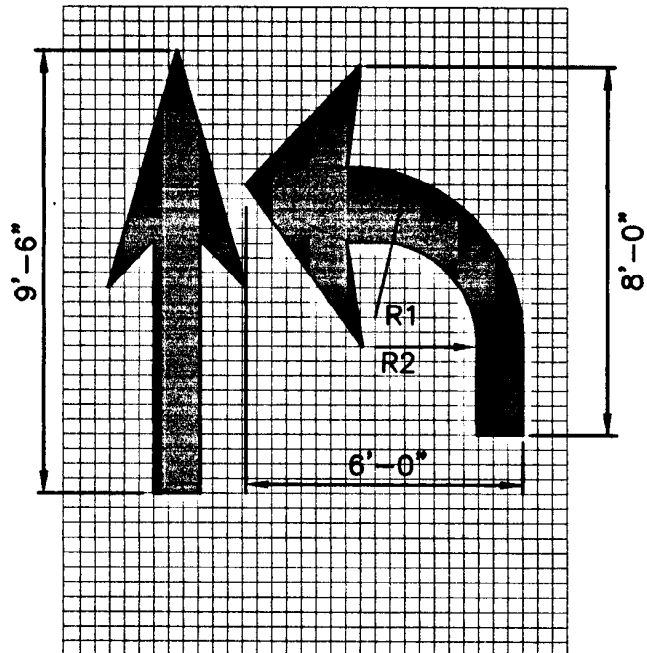
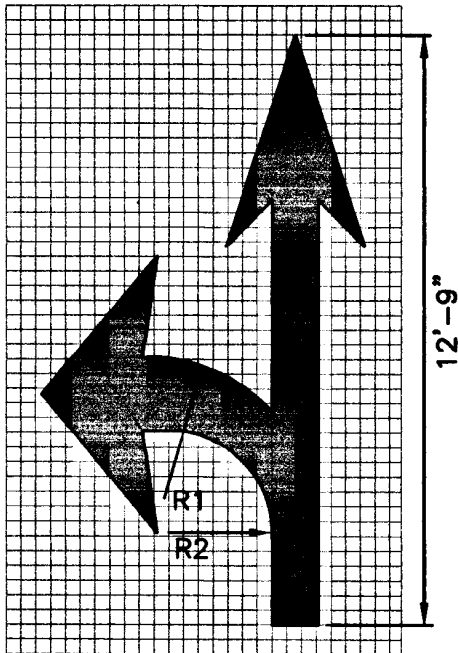
R.I. STANDARD  
19.6.0B

JUNE 15, 1998  
ISSUE DATE

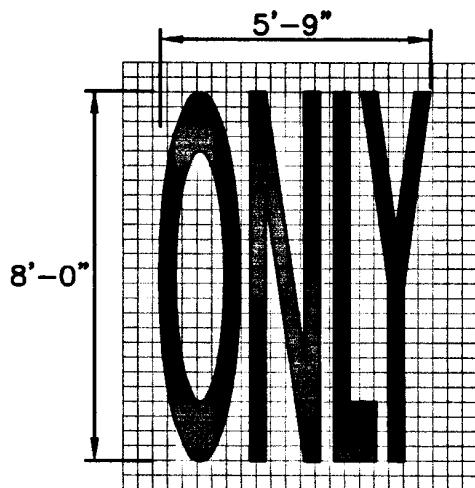
*Edward J. Gagliardi*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

NO.	BY	DATE



R1 = 3'-2"  
R2 = 2'-2"



#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE LONGITUDINAL SPACE BETWEEN WORD OR SYMBOL MESSAGES, INCLUDING ARROWS, SHOULD BE AT LEAST FOUR TIMES THE HEIGHT OF THE CHARACTER FOR LOW SPEED ROADS BUT NOT MORE THAN TEN TIMES THE HEIGHT OF THE CHARACTER UNDER ANY CONDITIONS.
3. THE SPACING OF THE PAVEMENT MARKINGS WILL BE AS SHOWN ON THE PLAN AND AS PER THE MUTCD.
4. SYMBOLS AND WORDS SHALL MEET THE REQUIREMENTS OF THE FHWA "STANDARD ALPHABET AND SYMBOLS FOR HIGHWAY PAVEMENT MARKINGS."

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

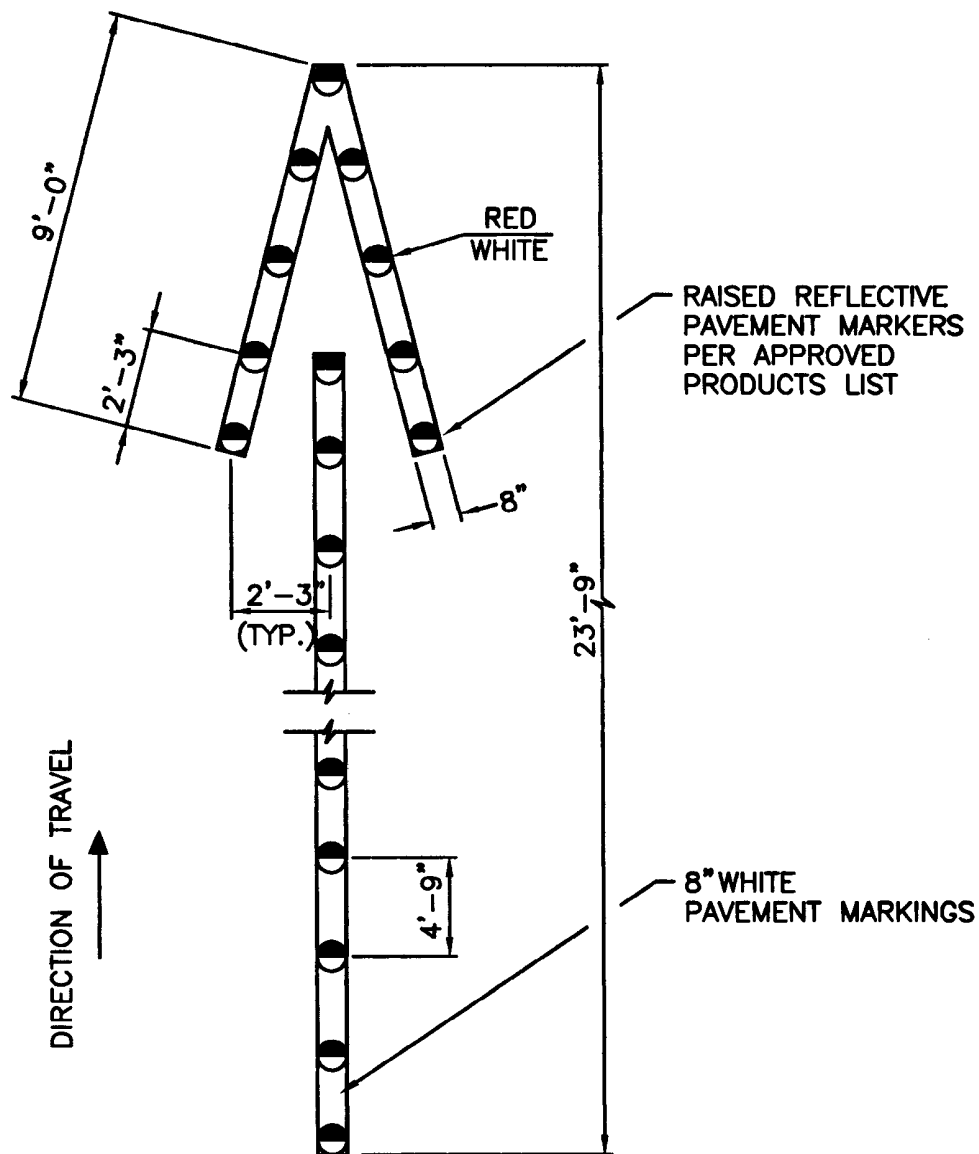
### PAVEMENT MARKINGS ARROWS AND ONLY

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





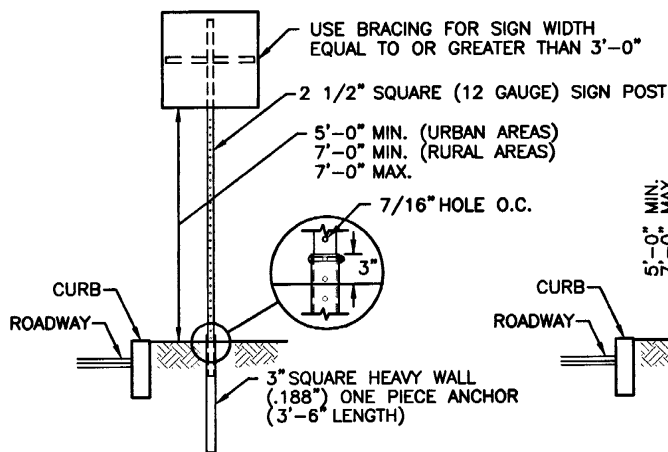


**NOTES:**

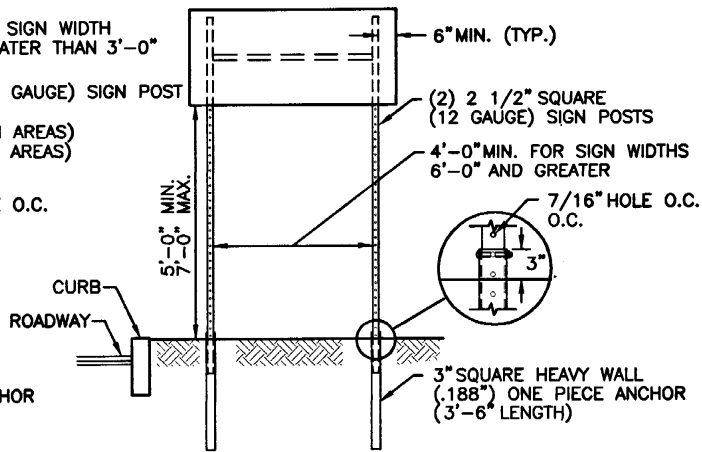
1. SHALL BE IN ACCORDANCE WITH SECTION T.20 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE INSTALLED AFTER THE 8" ARROW HAS BEEN PLACED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

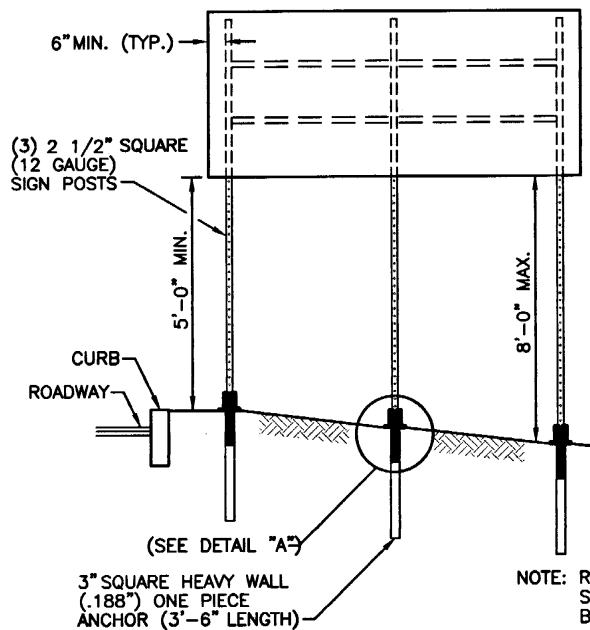
REVISIONS			BI-DIRECTIONAL CONTROL DEVICE		<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD 20.2.0 </div>
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE



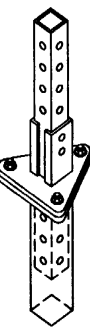
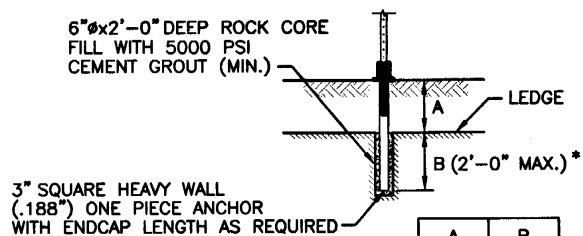
**SIGNS UP TO 12 SQ. FT.**



**SIGNS UP TO 28 SQ. FT.**



**SIGNS UP TO 8'-0" Wx4'-0" H**



NOTE: RECOMMENDED TORQUE ON SLIP-BASE FLANGE HEAD BOLT AND NUT 40 FT. LBS.

\* AT WEATHERED ROCK, DEPTH AS PER ENGINEER

**TYPICAL POST AT LEDGE  
LESS THAN 3'-0" BELOW GRADE**

A	B
3'-0"	1'-0"
2'-0"	1'-0"
1'-0"	1'-6"
0"	2'-0"

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SUPPORTS HAVE BEEN DESIGNED IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR A 10-YEAR MEAN WIND RECURRENCE INTERVAL.
3. FOR INSTALLATION IN GROUND OR BITUMINOUS CONCRETE DRIVE SIGN POST ANCHOR TO REQUIRED DEPTH SO THAT THE HOLE WILL MATCH TO SIGN POST ABOVE GROUND FOR THE BOLT CONNECTION. INSERT SIGN POST AND BOLT IN PLACE.
4. FOR INSTALLATION IN CONCRETE SEE STD. 25.3.0 AND FOLLOW THE PROCEDURE IN NOTE 2.
5. FOR INSTALLATION IN LEDGE LESS THAN 3'-0" BELOW GRADE SEE DETAIL ABOVE.
6. EDGE OF SIGN SHALL BE 1'-6" (MIN.) FROM EDGE OF CURB IN URBAN AREAS AND 6'-0" (MIN.) FROM EDGE OF CURB IN EDGE OF CURB IN RURAL AREAS.
7. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. BREAKAWAY SIGN SUPPORTS SHALL BE FABRICATED FROM STEEL AND SHALL CONFORM TO THE BREAKAWAY DESIGN SHOWN ON THIS SHEET.
9. STEEL POSTS SHALL CONFORM TO ASTM-A361, FY= 55 KSI. THE CROSS SECTION OF THE POST SHALL BE SQUARE TUBE FORMED OF 12 GAUGE (.105" U.S.S. GAUGE) COLD-ROLLED CARBON STEEL SHEETS WHICH HAVE BEEN ZINC COATED (1.25 OZ.) CONFORMING TO ASTM-A525, CAREFULLY ROLLED TO SIZE AND WELDED DIRECTLY IN THE CORNER BY HIGH FREQUENCY RESISTANCE WELDING OR EQUAL AND EXTERNALLY SCARED TO AGREE WITH CORNER RADII. STANDARD CORNER RADIUS SHALL BE 3/32" PLUS OR MINUS 1/64".
10. ALL BOLTS SHALL CONFORM TO ASTM-A307, CLASS A.
11. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS PER ASTM-A153.
12. FOR SIGNS GREATER THAN 32 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**SIGN POST SELECTION AND INSTALLATION DETAILS  
SQUARE POST (SIGNS UP TO 8'-0" Wx4'-0" H)**

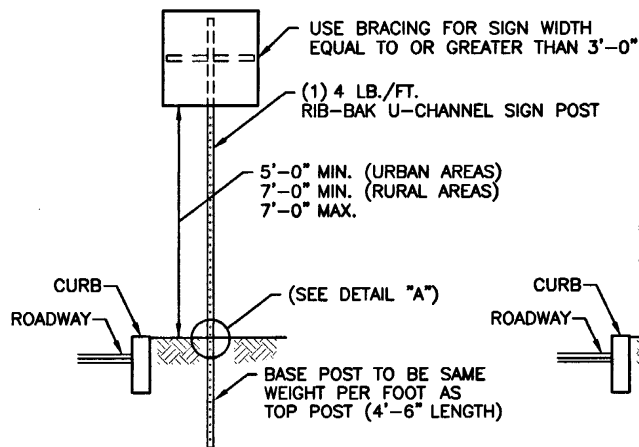
REVISIONS		
NO.	BY	DATE

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

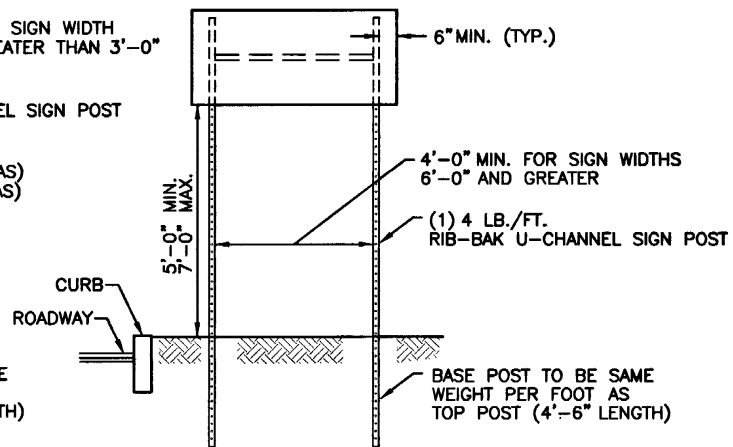
*Edward J. P. ...*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

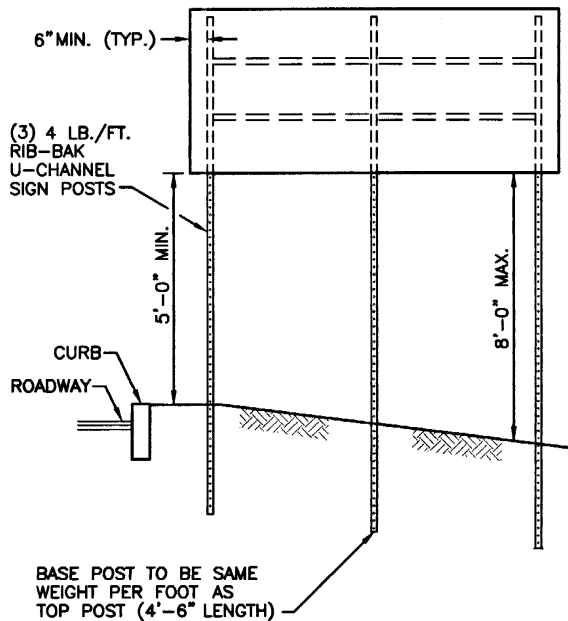
R.I.  
STANDARD  
**24.1.0**



SIGNS UP TO 12 SQ. FT.



SIGNS UP TO 28 SQ. FT.

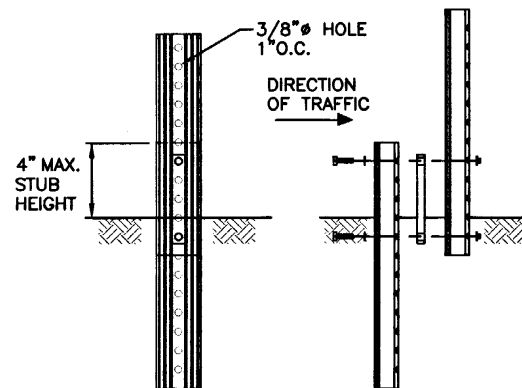


SIGNS UP TO 40 SQ. FT.



**RECOMMENDED TORQUE VALUES:**  
BOLTS TO THREADED BAR SPACER  
20 FT. LBS.  
SELF-LOCKING FLANGE NUT TO BOLTS  
20 FT. LBS.

TOP VIEW



FRONT VIEW

RIGHT SIDE VIEW

DETAIL "A"



**INSTALLATION PROCEDURE:**

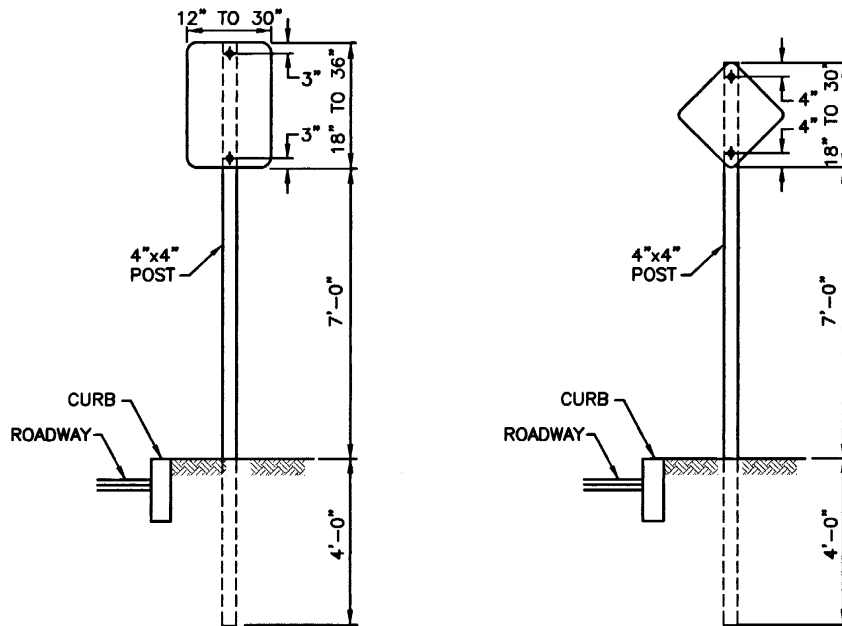
1. REMOVE A SPADE FULL OF SOIL (APPROXIMATELY 2" DEEP) FROM WHERE THE BASE POST WILL BE LOCATED.
2. DRIVE THE BASE POST IN THE CENTER OF THE HOLE JUST CREATED, TO WITHIN 4" OF GRADE LEVEL.
3. PLACE ONE BOLT AND FLAT WASHER IN THE TOP HOLE OF THE BASE POST. (IF THE TOP HOLE ON THE BASE POST, OR THE BOTTOM HOLE ON THE TOP POST IS LESS THAN 3/4" FROM END OF THE POST USE THE SECOND AND SIXTH HOLES.) WITH THE THREADED BAR SPACER ALIGNED WITH TOP HOLE ON THE BACK SIDE OF THE BASE POST, SECURELY TIGHTEN THE BOLT TO 20 FT. LBS. OF TORQUE. REPEAT THIS PROCESS FOR THE LOWER BOLT.
4. NEST THE TOP POST OVER THE PROTRUDING BOLTS ON THE BASE POST. PLACE A SELF-LOCKING FLANGE NUT ON EACH BOLT AND TIGHTEN SECURELY TO 20 FT. LBS. OF TORQUE.
5. REPLACE SOIL REMOVED IN STEP 1.
6. IN TRIPLE POST INSTALLATIONS USING 4 LB./FT. POSTS IN WEAK SOIL, A 1'-0"W x 6"H SOIL PLATE IS REQUIRED.

**NOTES:**

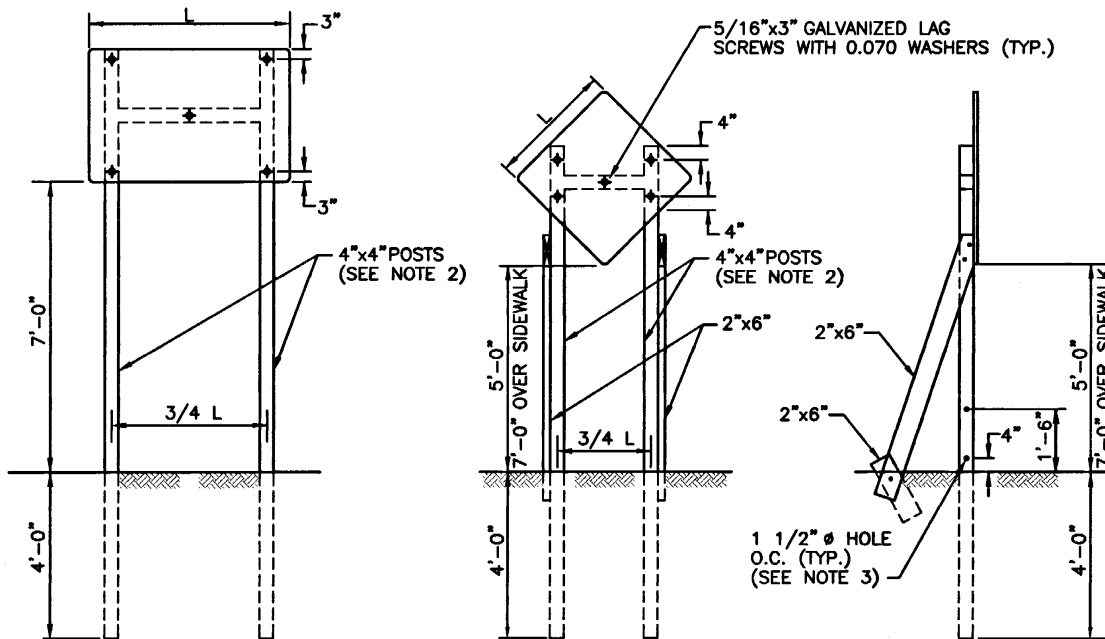
1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE SILVER ANODIZED BAR SPACER IS FOR USE WITH 2, 2.5 AND 2.75 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
3. THE GOLD ANODIZED BAR SPACER IS FOR USE WITH 3 AND 4 LB./FT. RIB-BAK POST GRADE SP-80 ONLY.
4. INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.
5. FOR SIGNS GREATER THAN 40 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			SIGN POST SELECTION AND INSTALLATION DETAILS U-CHANNEL POST (SIGNS UP TO 8'-0"Wx4'-0"H)		R.I. STANDARD 24.2.0
NO.	BY	DATE			
			 		JUNE 15, 1998 ISSUE DATE



SIGNS UP TO 10 SQ. FT.



SIGNS UP TO 60 SQ. FT.

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. USE (2) 4"x6" POSTS FOR SIGN AREAS GREATER THAN 20 SQ. FT.
3. DRILL 1 1/2" Ø HOLES FOR 4"x6" POSTS ONLY.
4. FOR SIGNS 5'-0"x5'-0" AND LARGER USE DIAGONAL BRACING ON EACH VERTICAL POST AND 4 LAG SCREWS
5. CONSTRUCTION AND TEMPORARY SIGN PANELS SHALL BE 3/4" THICK EXTERIOR GRADE PLYWOOD OR ALUMINUM.
6. ALL SIGN SUPPORTS (INCLUDING TEMPORARY) MUST BE SUCCESSFULLY CRASH TESTED.
7. FOR SIGNS GREATER THAN 60 SQ. FT., REFER TO STD. 30.1.0, 30.1.1, 30.2.0, 30.2.1, 30.3.0, 30.3.1, 30.4.0, 30.4.1, 30.4.2 AND 30.4.3.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION AND TEMPORARY  
SIGN MOUNTINGS (SIGNS UP TO 60 SQ. FT.)**

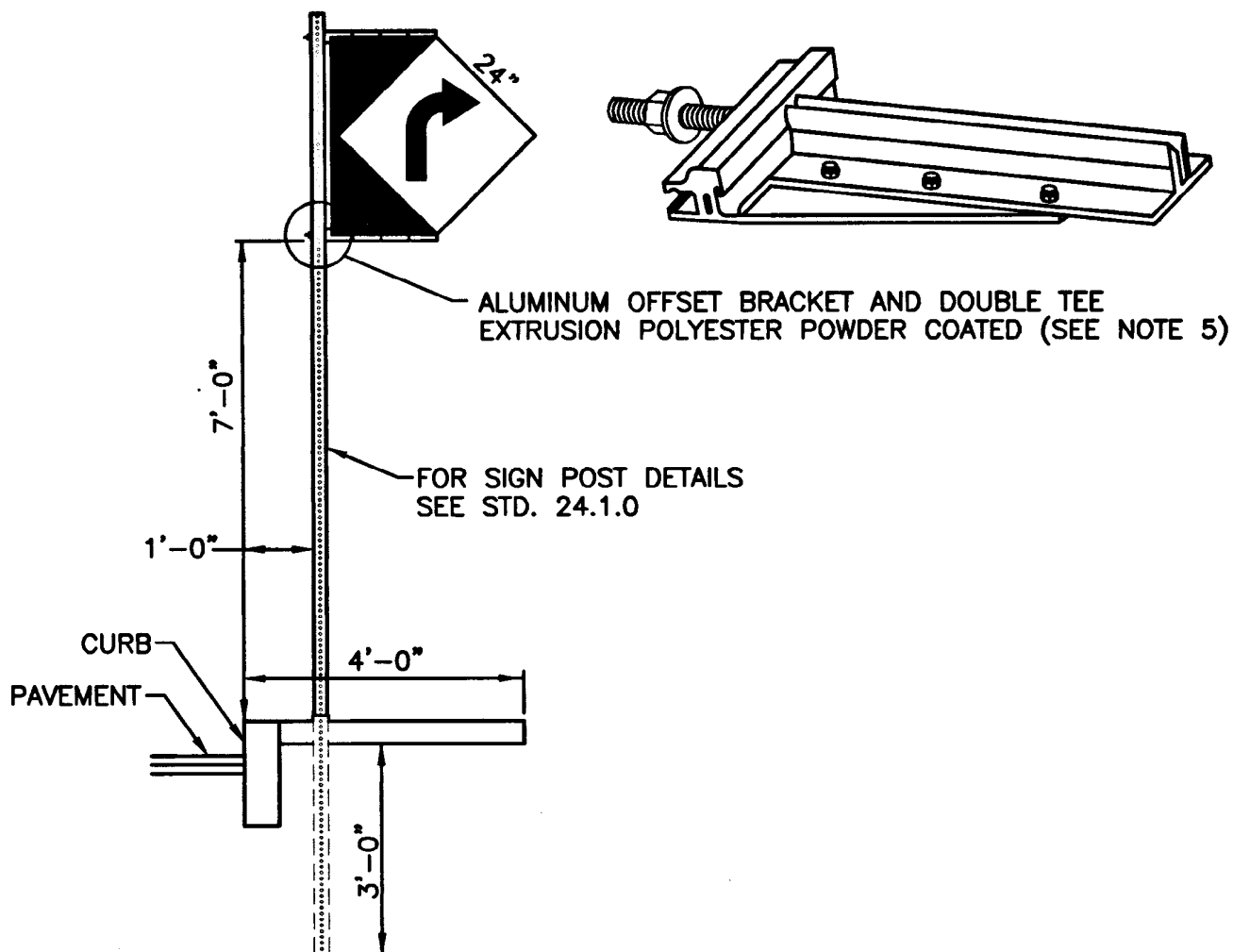
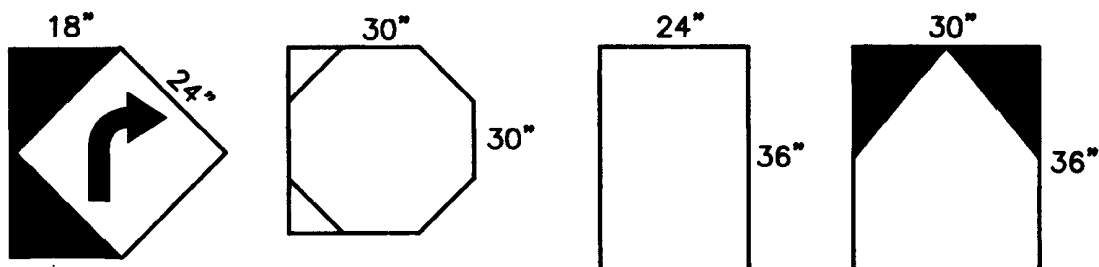
REVISIONS		
NO.	BY	DATE

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Berke*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS SIGN MOUNTING SHALL NOT REPLACE STD. 24.6.0 PARKING SIGN MOUNTING.
3. INSTALLATION SOIL, GRAVEL, OR ASPHALT CAP AND SLEDGE HAMMER. CONCRETE USE PNEUMATIC HAMMER OR CONCRETE DRILL.
4. MAXIMUM SIGN AREA 7.5 SQ. FT.
5. DOUBLE TEE EXTRUSION MAY BE ORDERED OR CUT TO EQUAL HORIZONTAL EDGE OF SIGN.

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

### CANTILEVER BREAKAWAY SIGN SUPPORT FOR 4'-0" TO 5'-0" SIDEWALKS

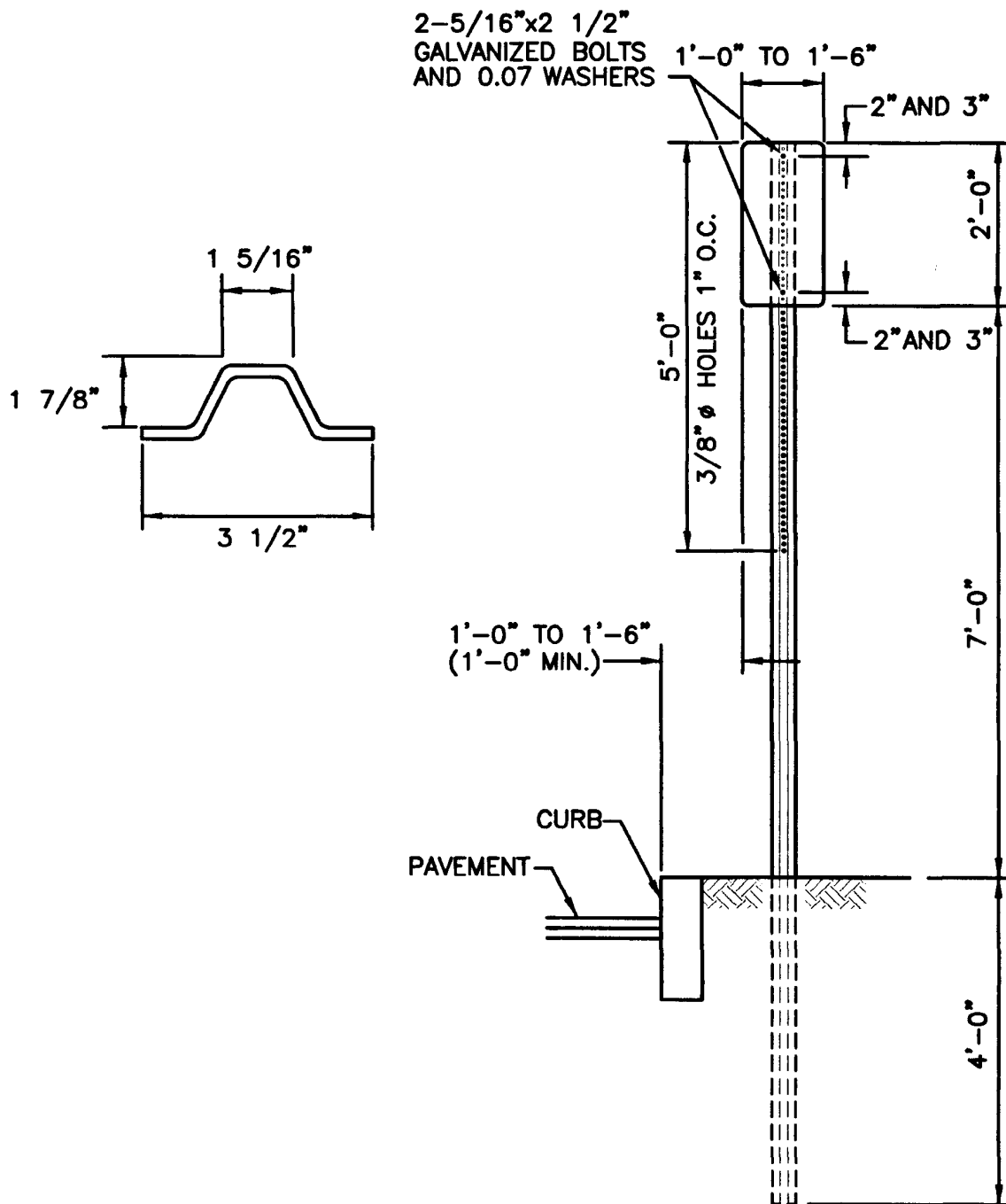
*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE STANDARD SPECIFICATIONS.
2. PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° WITH A LINE PARALLEL TO FLOW OF TRAFFIC, 1'-6" (1'-0" MIN.) FROM EDGE OF CURB FACE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

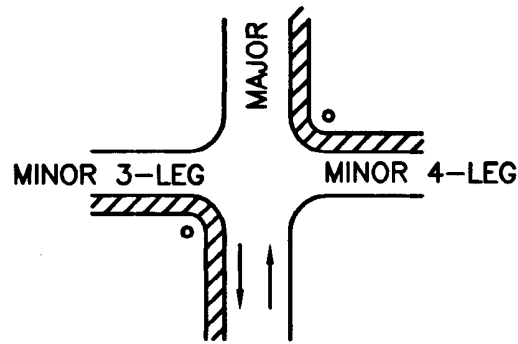
**PARKING SIGN MOUNTING DETAIL**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

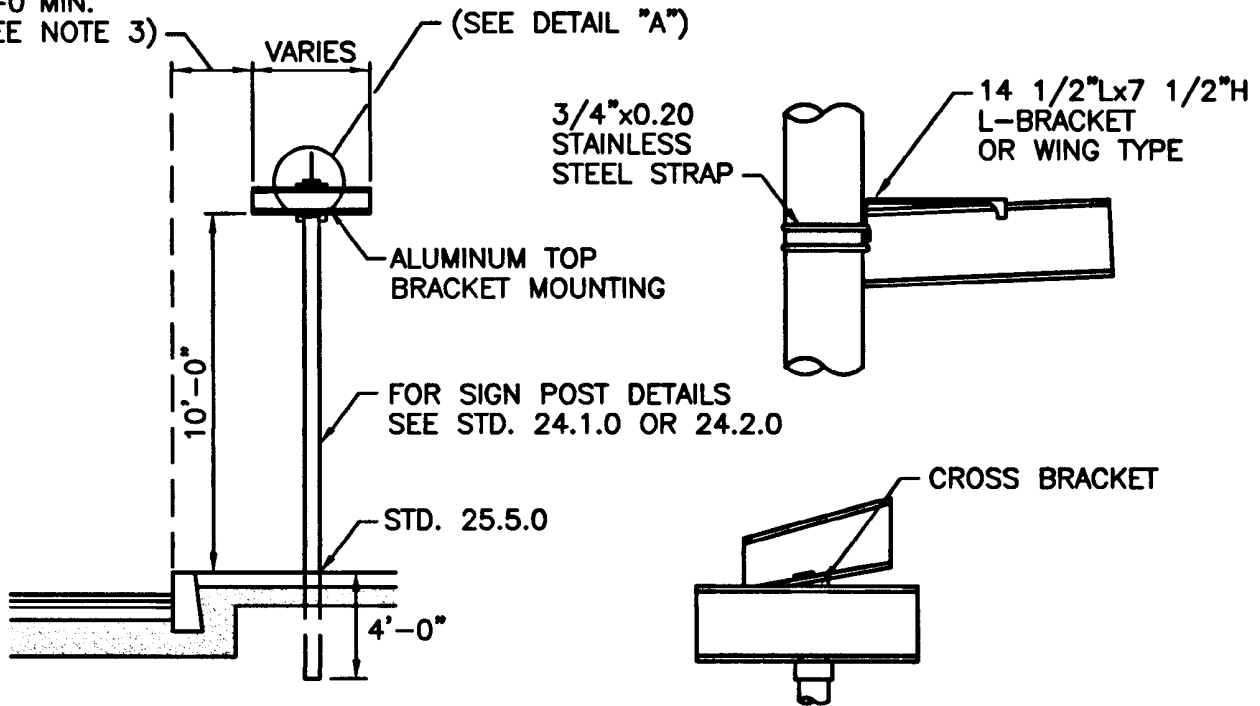




## TYPICAL SIGN LOCATION

IF SIGNS ARE ON THEIR OWN SUPPORT POST, THE POST SHALL BE LOCATED NEARER TO THE MAJOR STREET AND WITHIN 5'-0" OF THE P.T. OF THE CURVE.

2'-0"+ DESIRABLE  
1'-0" MIN.  
(SEE NOTE 3)



POST ANCHOR

DETAIL "A"

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. EACH SIGN SHALL HAVE LEGEND ON BOTH SIDES.
3. POSTS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE BACK OF SIDEWALK, UNLESS SPACE DOES NOT PERMIT.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

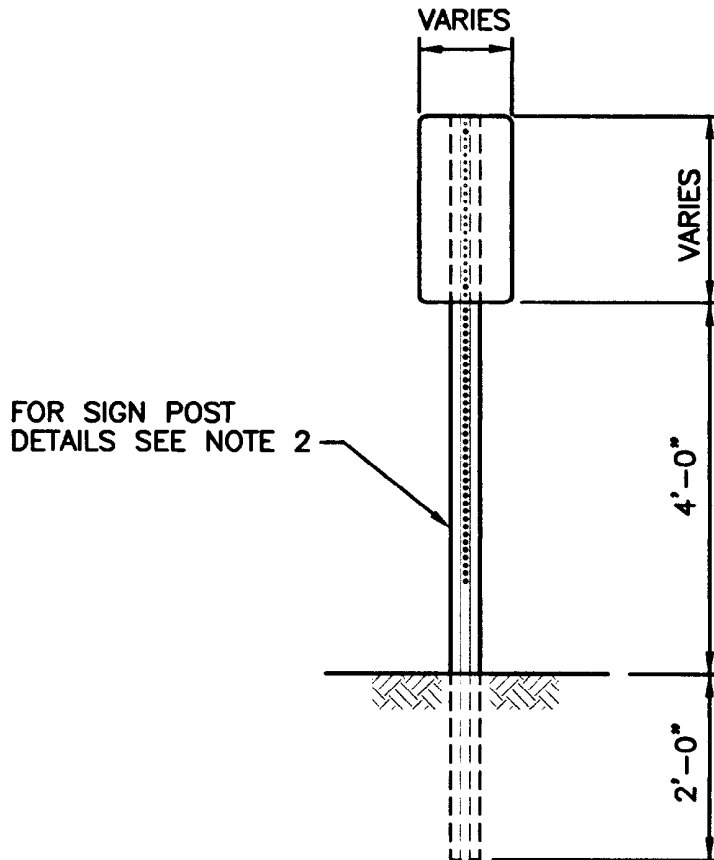
## STREET SIGN MOUNTING DETAIL

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.19 OR THE R.I. STANDARD SPECIFICATIONS.
2. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0
3. POST LENGTH FOR MILE MARKER SHALL BE 8'-0" WITH 3/8"  $\phi$  HOLES 1" O.C. FOR A LENGTH OF 2'-6" FROM TOP OF POST.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**REVISIONS**

NO.	BY	DATE

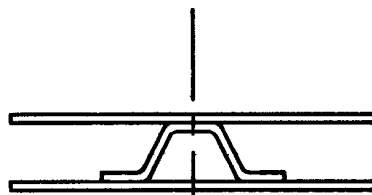
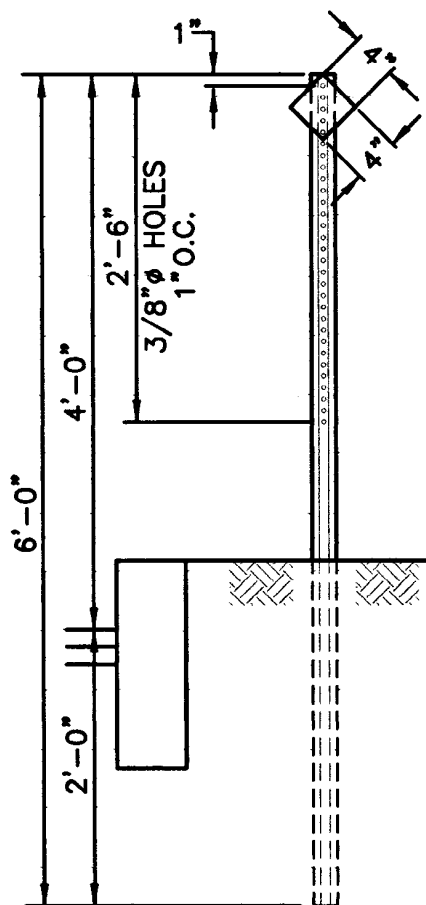
**MILE MARKER MOUNTING DETAIL**

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

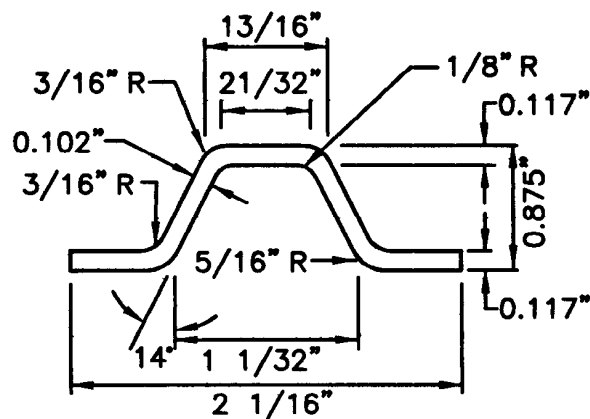
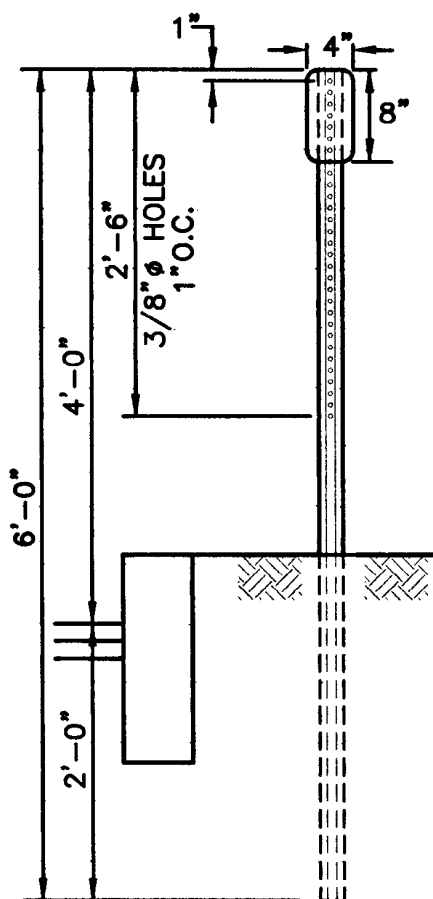




**BACK TO BACK**



**SINGLE MOUNTING**



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. INSTALLATION SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
3. MOUNT WITH 3/16" ALUMINUM DRAW RIVETS AND WASHERS OR 1/4" ALUMINUM CARRIAGE BOLTS AND WAHERS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**LIGHTWEIGHT STEEL DELINEATOR  
MOUNTING DETAIL**

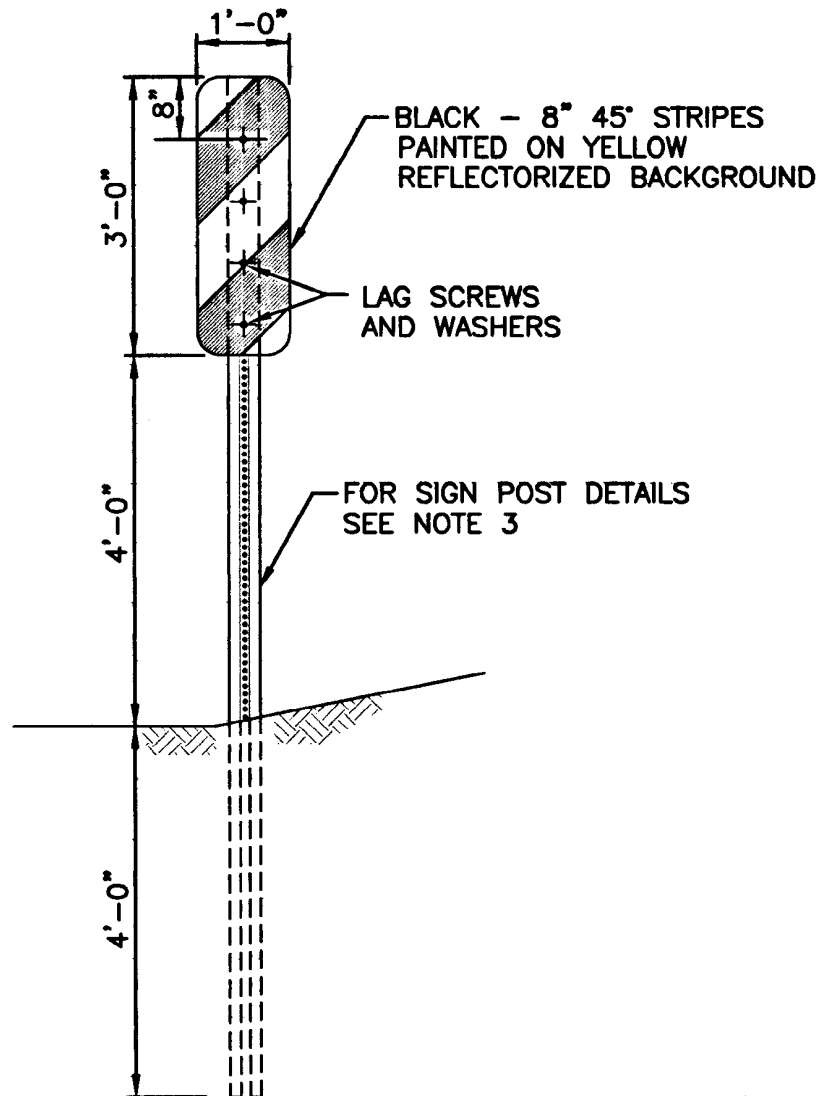
REVISIONS		
NO.	BY	DATE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
**24.6.3**

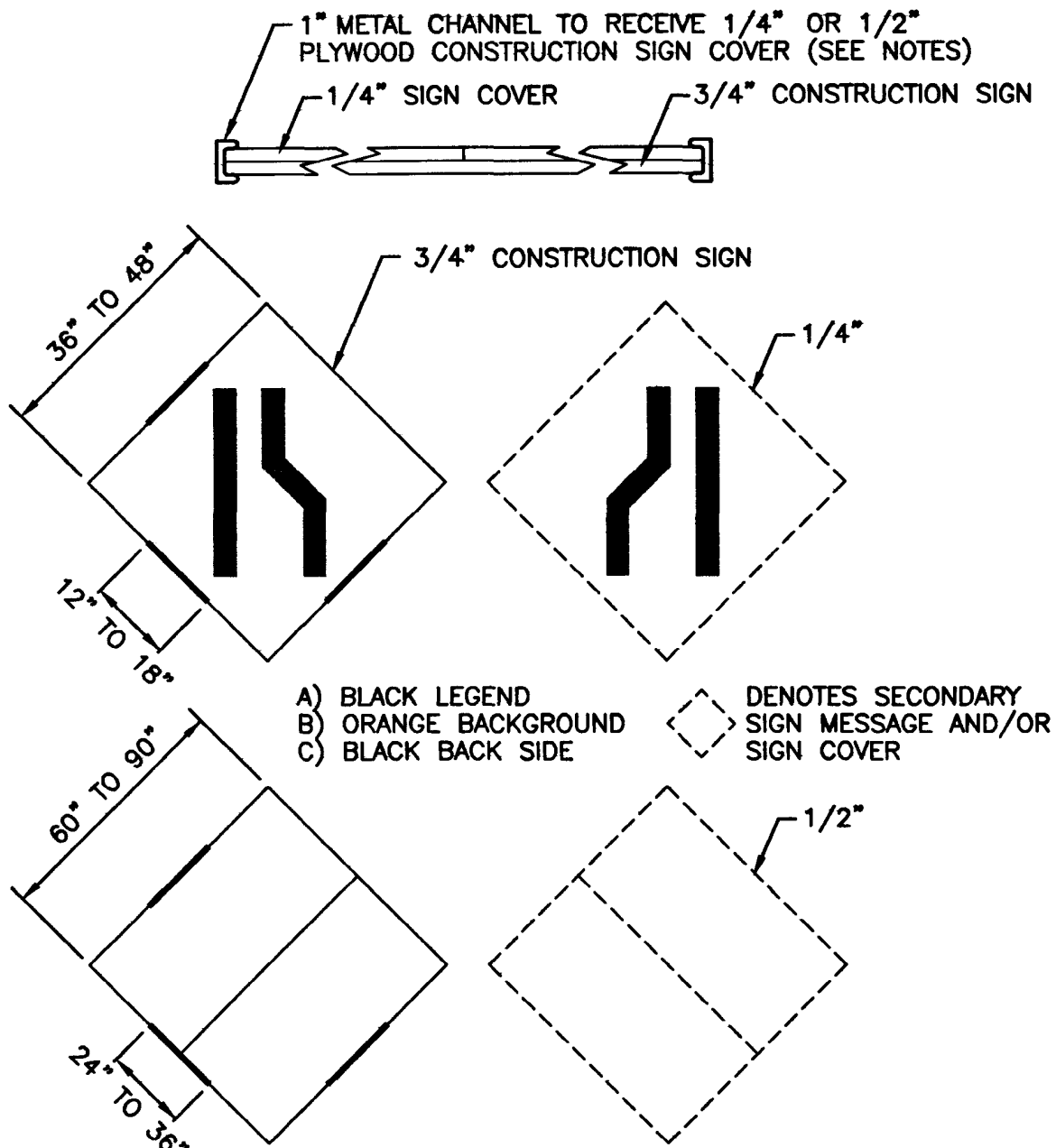


**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.18 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHOWN IS FOR RIGHT BRIDGE ABUTMENT. USE OPPOSITE SIGN FOR LEFT SIDE.
3. POSTS FOR MARKERS SHALL CONFORM TO STD. 24.6.0.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			<b>BRIDGE ABUTMENT MARKER MOUNTING DETAIL</b>		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>24.6.4</b> </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <i>James H. Gagliardi</i>  CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> <i>Edmund J. Parker Jr.</i>  CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998  ISSUE DATE </div> </div>		



#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 922 OR THE R.I. STANDARD SPECIFICATIONS.
2. HARD COVER - FOR DAILY COVERING OF CONSTRUCTION SIGNS AS NEEDED OR TO CHANGE SIGN MESSAGE AS NEEDED.
3. SOFT COVER - AN ALTERNATIVE TO USING A PLYWOOD SIGN COVER WILL BE A TARP COVER (NON-TRANSPARENT) WITH GROMMETS FOR THE PURPOSE OF RECEIVING A CORD OR A ROPE TO SECURE TARP COVER TO EXISTING CONSTRUCTION SIGN FACE. TARP COVER DIMENSIONS SHALL BE AT LEAST EQUAL TO THE CONSTRUCTION SIGN DIMENSIONS. THIS SOFT COVER IS SOLELY FOR THE PURPOSE OF COVERING CONSTRUCTION SIGNS, AT NO TIME SHALL SIGN MESSAGES APPEAR ON THE FACE OF THE TARP COVERS, NOR SHALL TARP COVERS BE SECURED BY TAPING OR STAPLING TO FRONT OF SIGN.

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

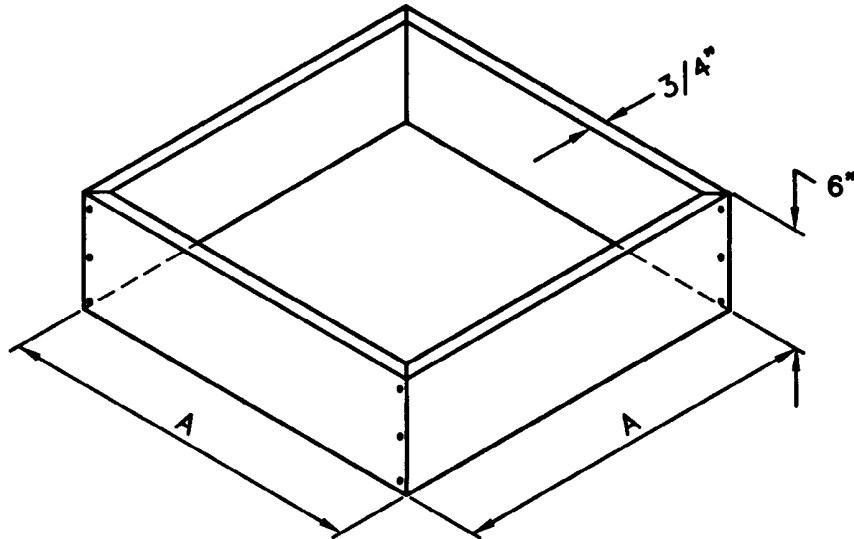
### TEMPORARY CONSTRUCTION SIGN COVER DETAIL

*James H. Coughlin*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



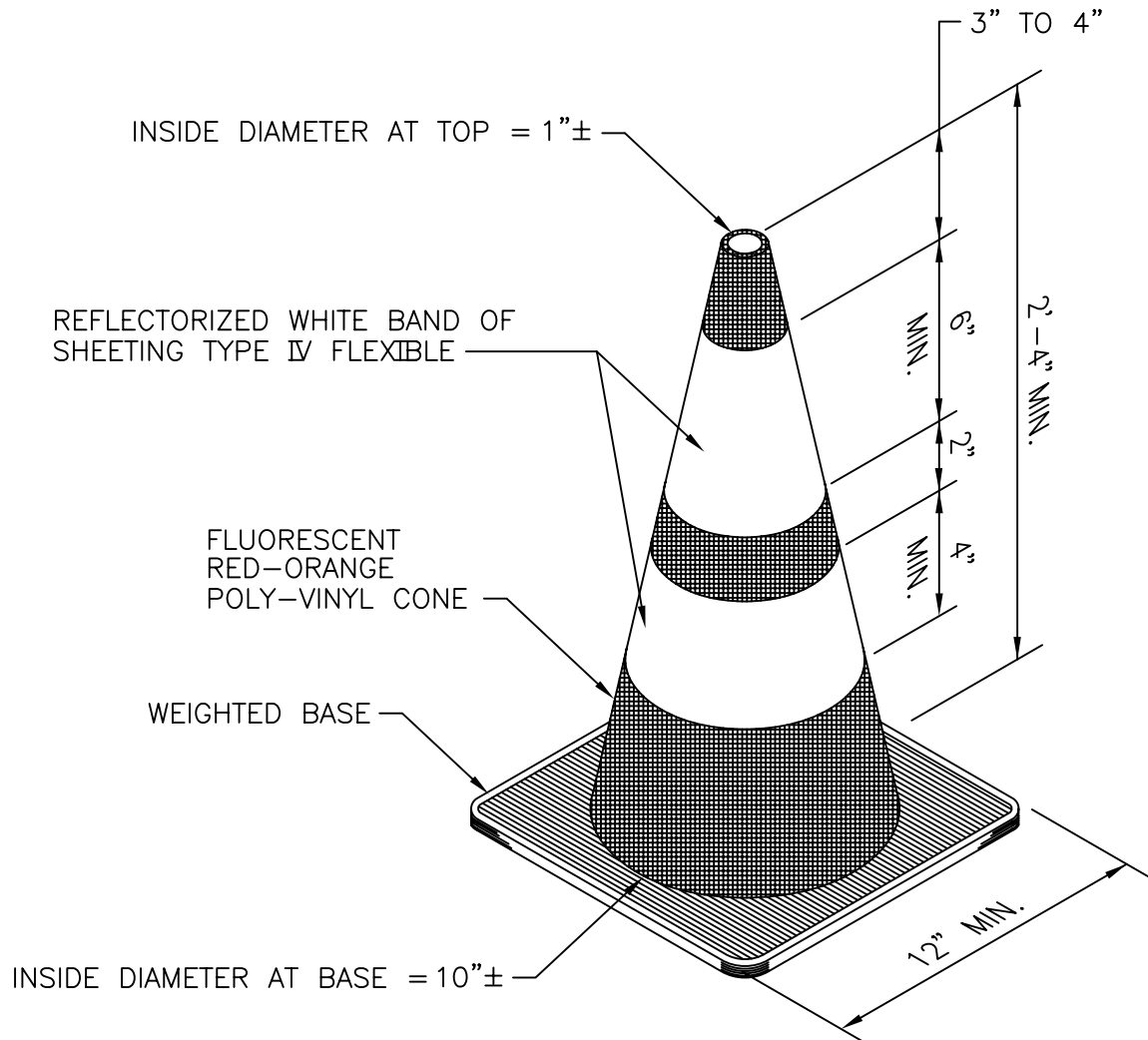


**NOTES:**

1. 3/4"x6" BOARDS TO BE USED FOR FORMS FOR SIGN POST MOUNTING IN CONCRETE AND ASPHALT SIDEWALK AREAS.
2. DIMENSION "A" SHALL BE 6" LARGER THAN THE GREATER DIMENSION OF THE REQUIRED POST, BUT 8" MINIMUM.
3. AFTER INSTALLATION OF THE POST AND PROPER COMPACTION, THE HOLE SHALL BE PAVED TO MATCH THE SURROUNDING SIDEWALK.
4. THE BOX FORM SHALL BE REMOVED PRIOR TO PATCHING THE SIDEWALK AREA.
5. IN CONCRETE SIDEWALK AREAS EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE NEW PATCH AND THE ADJACENT SIDEWALK AREA.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**



REVISIONS			BOX FORM		<div style="border: 2px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="font-size: 0.8em; margin-bottom: 5px;">R.I. STANDARD</div> <div style="font-size: 1.5em; margin: 0;">25.2.0</div> </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">   <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;">   <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: right;"> <small>JUNE 15, 1998</small>  <small>ISSUE DATE</small> </div> </div>		



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. DIMENSIONS MAY VARY WITH MANUFACTURER'S RECOMMENDATIONS.
3. IN AREAS WHERE POSTED SPEED IS 45 MPH AND OVER ADD A 7 LB. WEIGHTED RING TO EACH CONE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

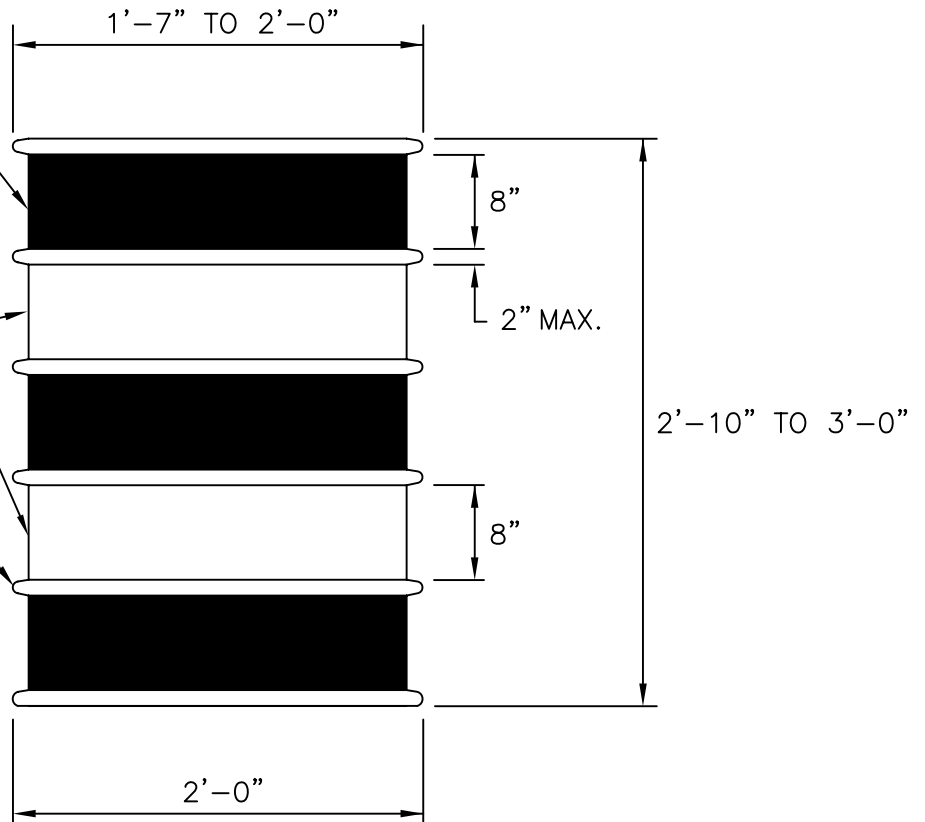
REVISIONS			FLUORESCENT TRAFFIC CONE	<div><div>R.I. STANDARD 26.1.0</div></div>
NO.	BY	DATE		
1	MLP	Mar 05		
			<div><div></div><div>CHIEF ENGINEER TRANSPORTATION</div></div> <div><div></div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div> <div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div>	



6" ORANGE REFLECTIVE  
SHEETING TYPE IV  
FLEXIBLE (Typical)

6" WHITE REFLECTIVE  
SHEETING TYPE IV  
FLEXIBLE (Typical)

ORANGE  
NON-REFLECTIVE  
POLYETHYLENE DRUM



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. BASE TO BE ADAPTED FOR SANDBAG BALLAST.
3. DRUM CAN BE CYLINDRICAL OR PARTLY CYLINDRICAL WITH A FLAT SIDE.
4. DRUM SHALL BE MANUFACTURED FROM TOUGH, REBOUNDABLE PLASTIC, MADE OF HIGH DENSITY (HARD) POLYETHYLENE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE
1	MLP	Mar 05

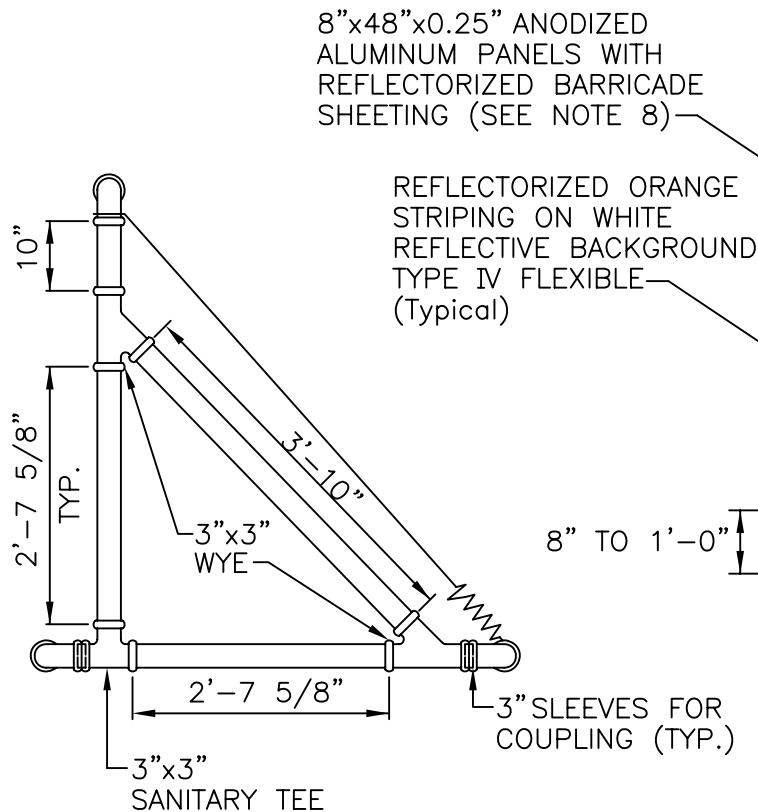
**POLYETHYLENE DRUM WITH MARKINGS**

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

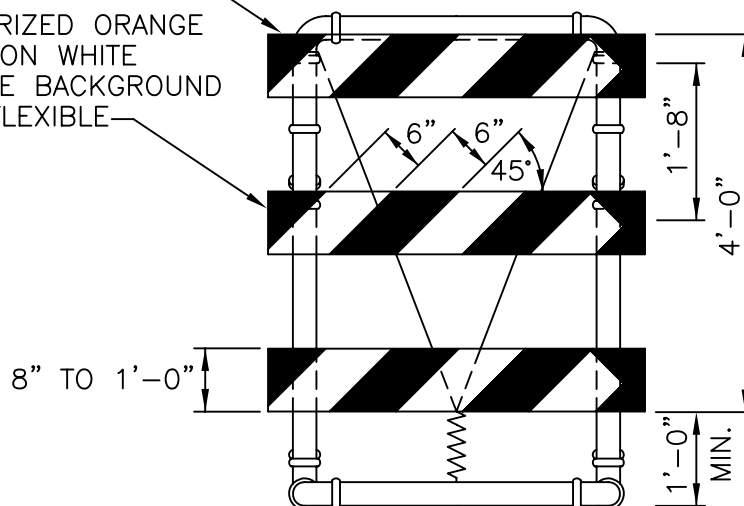
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

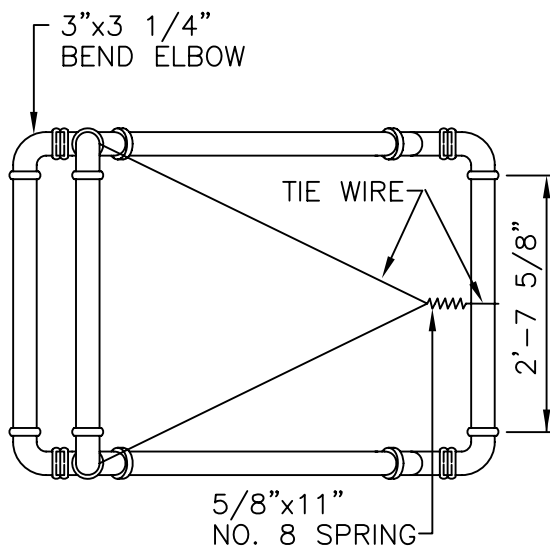




SIDE ELEVATION



FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL PIPE SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE RATED CLASS SDR 21 OR SDR 26 CONFORMING TO ASTM D2241 OR ASTM D2729.
3. JOINT FILLINGS MAY BE PVC-ASTM D 2665 OR ACRYLONITILE BUTADIENE STYRENE (ABS) ASTM D 2661 (DRAINAGE WASTE AND VENT).
4. ALL PIPES SHALL BE WHITE. WHITE FITTINGS ARE PREFERRED, BLACK MAY BE USED.
5. ALL JOINTS SHALL BE FREE TO SEPARATE UPON VEHICLE IMPACT.
6. A FIXED FRANGIBLE PAVEMENT CONNECTION PREFERRED. SAND BAGS MAY BE SUBSTITUTED.
7. STRIPES SHALL BE SLOPED DOWNWARD IN DIRECTION OF TRAFFIC TO PASS.
8. PVC PIPE SHALL BE ULTRAVIOLET LIGHT STABILIZED.
9. ATTACH PANELS WITH 1" NO. 14 PAN HEAD METAL SCREWS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

PVC PLASTIC PIPE TYPE III BARRICADE

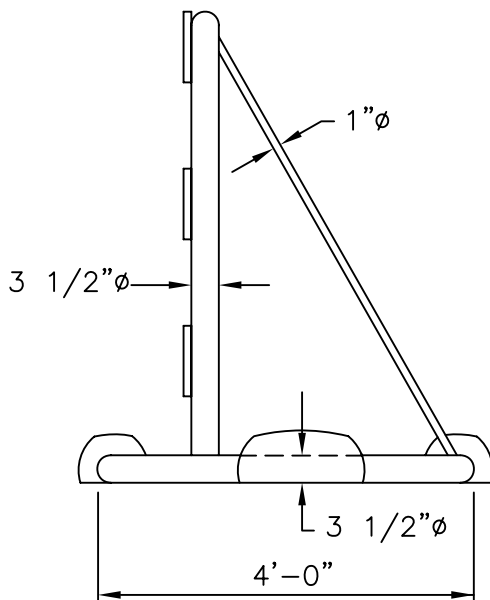
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James A. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

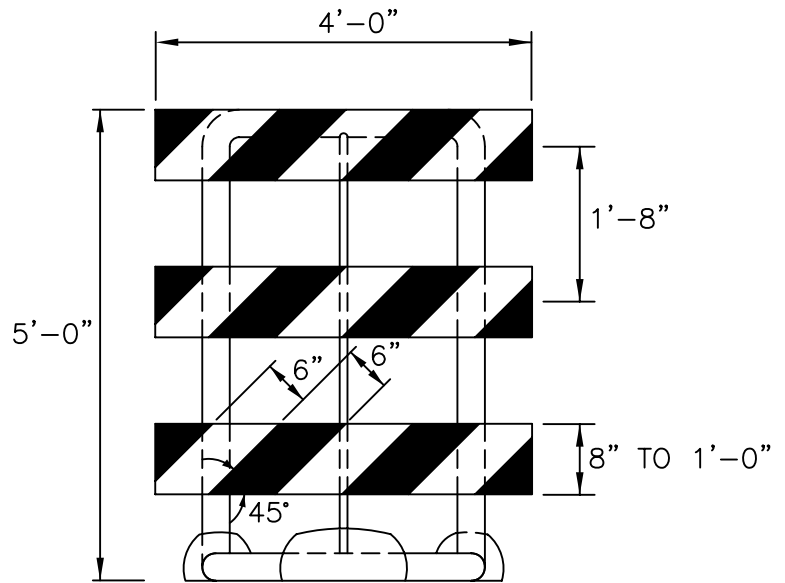
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

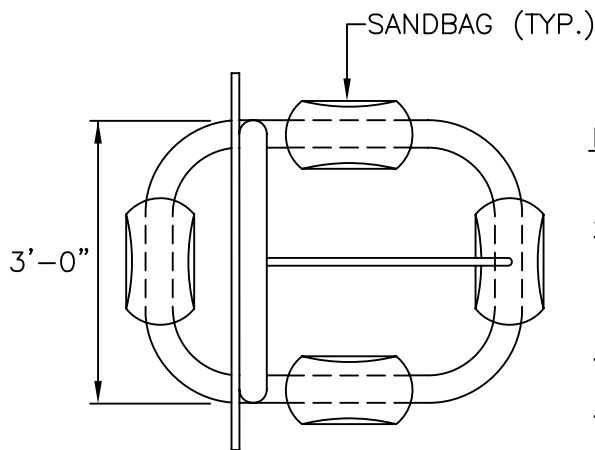




SIDE ELEVATION



FRONT ELEVATION



PLAN

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 923 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE BASE AND UPRIGHT PIPE SHALL BE ROTATIONALLY MOLDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248, CLASS A3-E4 OR CLASS II A4.
3. THE BRACE SHALL BE EXTRUDED POLYETHYLENE PLASTIC CONFORMING TO ASTM D1248-III A4.
4. ALL PIPE SHALL BE WHITE AND SHALL BE ULTRAVIOLET LIGHT STABILIZED.
5. ALTERNATE ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED, 6" WIDE, SLOPED DOWNWARD IN THE DIRECTION OF TRAFFIC TO PASS.
6. THE BARRICADE RAILS SHALL BE 9"x48"x0.125" PLASTIC PANELS ATTACHED WITH 1" PLASTIC RIVETS, 4 PER RAIL.
7. THIS IS AN APPROVED ALTERNATE TO STD. 26.3.0.
8. ALL SHEETING SHALL BE TYPE IV FLEXIBLE SHEETING.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005






PLASTIC PIPE TYPE III BARRICADE






*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION






*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION






JUNE 15, 1998  
ISSUE DATE













SIGN NUMBER	* R1-1	* R1-2	R2-1	R2-4a	R2-5c
LEGEND					
COLOR	BACKGROUND COPY	WHITE RED	WHITE BLACK	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	24" 30" 36" 48" 24" 30" 36" 48"	36" 48" 60" 36" 48" 60"	24" 36" 48" 24" 36" 48"	24" 36" 48" 24" 36" 48"




SIGN NUMBER	R3-1	R3-2	R3-3	R3-4	R3-5
LEGEND					
COLOR	BACKGROUND COPY	WHITE RED (BLACK ARROW)	WHITE BLACK	WHITE RED (BLACK ARROW)	YELLOW BLACK
SIGN DIMENSION	WIDTH HEIGHT	24" 24"	24" 24"	24" 24"	30" 36"

SIGN NUMBER	R3-6	R3-7 (R OR L)	R4-1	R4-2	R4-3
LEGEND					
COLOR	BACKGROUND COPY	WHITE BLACK	WHITE BLACK	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	30" 36"	18" 24" 24" 30"	18" 24" 24" 30"	24" 36" 48" 30" 48" 60"

SIGN NUMBER	R4-5	R4-6	* R4-7	R4-7a	R4-7b
LEGEND					
COLOR	BACKGROUND COPY	WHITE BLACK	WHITE BLACK	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	24" 36" 48" 30" 48" 60"	24" 30"	18" 24" 36" 48" 24" 30" 48" 60"	18" 24" 36" 48" 24" 30" 48" 60"

SIGN NUMBER	* R5-1	* R5-1a	R5-6	R5-10b	R6-1 (R OR L)
LEGEND					
COLOR	BACKGROUND COPY	RED WHITE	WHITE RED (BLACK BICYCLE)	WHITE BLACK	BLACK-ARROW WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	30" 36" 48" 30" 36" 48"	36" 24"	30" 18"	36" 12"

SIGN NUMBER	R7-1	R7-2	R7-3	R7-4	R7-5
LEGEND					
COLOR	BACKGROUND COPY	WHITE RED	WHITE RED	WHITE RED	WHITE GREEN
SIGN DIMENSION	WIDTH HEIGHT	12" 18"	12" 18"	12" 18"	12" 18"

SIGN NUMBER	R8-7	R11-1	R11-2
LEGEND			
COLOR	BACKGROUND COPY	WHITE BLACK	WHITE BLACK
SIGN DIMENSION	WIDTH HEIGHT	30" 48" 24" 36" 48" 60"	48" 30"

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 1.15 OF THE R.I. STANDARD SPECIFICATIONS.
  2. \* DENOTES TYPE VI GRADE SHEETING.
  3. REGULATORY SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.6.0.
  4. THICKNESS OF ALUMINUM SIGN PLATES:  
LESS THAN 10 SQ. FT. - 0.081 IN.  
10 SQ. FT. TO 36 SQ. FT. - 0.102 IN.  
GREATER THAN 36 SQ. FT. - 0.125 IN.
  5. FOR ADDITIONAL SIGNS SEE THE MUTCD.

# RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS	NO.	BY	DATE

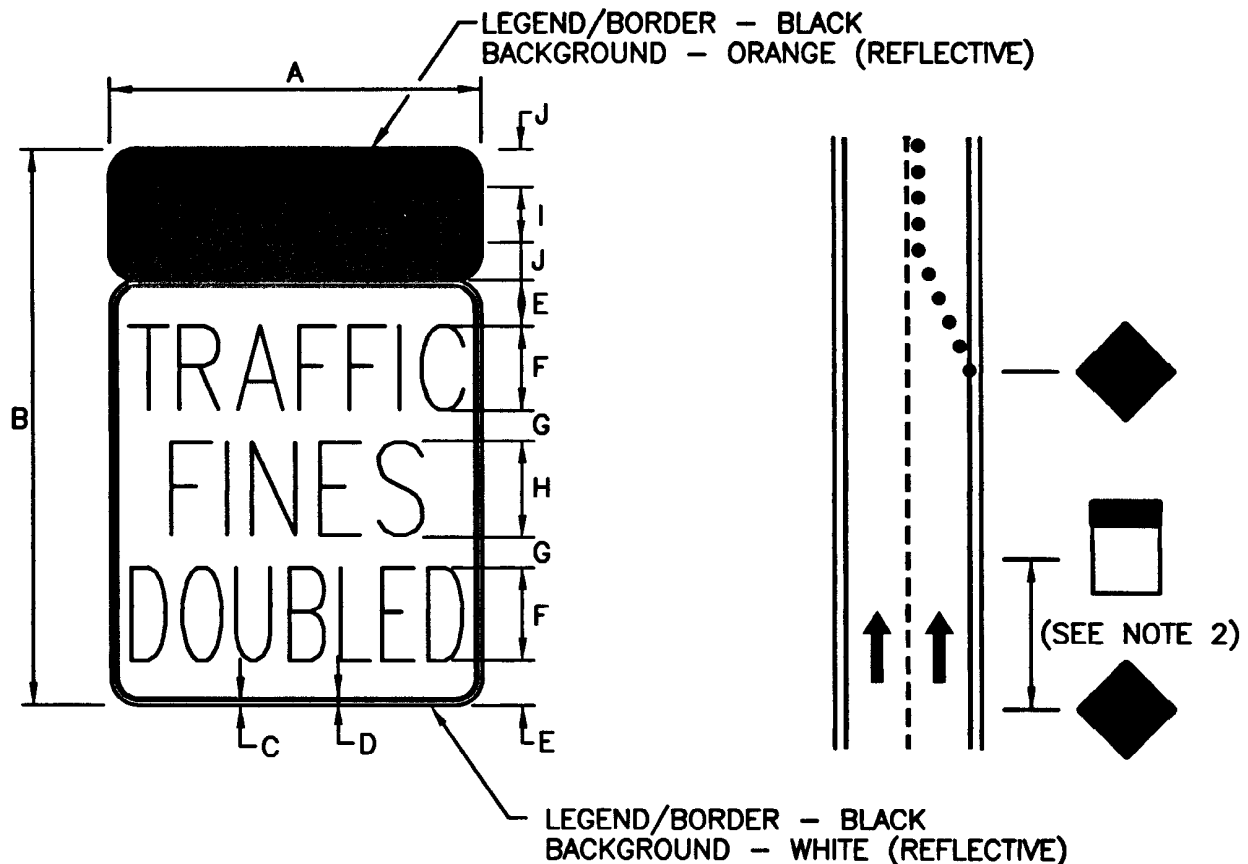
## REGULATORY SIGNS

*James A. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Sharon D. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
27.1.0






SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STANDARD	24	36	3/8	5/8	3 1/2	6B	2 1/2	6C	4C	2
RURAL	36	54	5/8	7/8	5	8B	4	8C	6C	3
EXPRESSWAY	48	72	3/4	1 1/4	7	10B	5	10C	8C	5

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION T.15 OF THE R.I. STANDARD SPECIFICATIONS.
2. STANDARD: > 50'-0" < 200'-0"  
RURAL: > 200'-0" < 400'-0"  
EXPRESSWAY: > 400'-0" < 800'-0"
3. WHEN INSTALLING ON JERSEY BARRIERS LESS THAN 48" WIDE, A 36"x54" SIGN DIMENSION MAY BE USED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			TRAFFIC FINES IN WORK ZONE REGULATORY SIGN		
NO.	BY	DATE			
			 		<b>JUNE 15, 1998</b> ISSUE DATE
			CHIEF ENGINEER TRANSPORTATION		



NO.	BY	DATE





REVISIONS




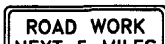
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

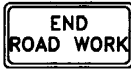
CONSTRUCTION SIGNS

CHIEF ENGINEER  
TRANSPORTATION  
JUNE 15, 1998  
ISSUE DATE



SIGN NUMBER		* W21-4				W20-2				W20-3				W20-4			
LEGEND																	
		(SEE NOTE 2)				(SEE NOTE 2)				(SEE NOTE 2)				(SEE NOTE 2)			
COLOR	BACKGROUND	ORANGE				ORANGE				ORANGE				ORANGE			
	COPY	BLACK				BLACK				BLACK				BLACK			
DIMENSION	WIDTH	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"
	HEIGHT	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"

SIGN NUMBER		W20-5 (R OR L)				W20-7				W20-7a				*G20-1			
LEGEND																	
		(SEE NOTE 2)				(SEE NOTE 2)											
COLOR	BACKGROUND	ORANGE				ORANGE				ORANGE				ORANGE			
	COPY	BLACK				BLACK				BLACK				BLACK			
DIMENSION	WIDTH	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	60"			
	HEIGHT	30"	36"	48"	96"	30"	36"	48"	96"	30"	36"	48"	96"	24"			

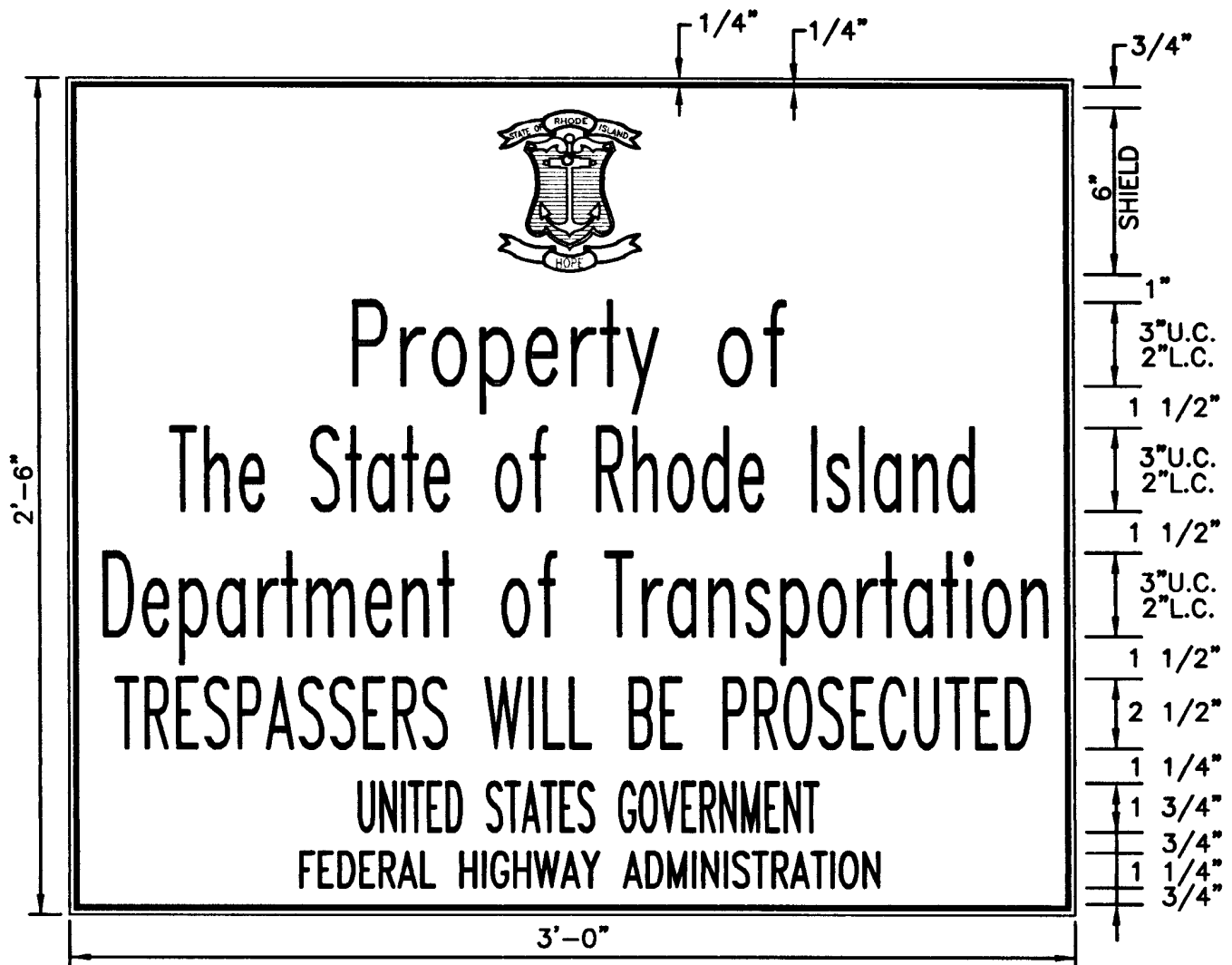
SIGN NUMBER	* G20-2A			
LEGEND				
	(SEE NOTE 2)			
	COLOR	ORANGE		
	BACKGROUND	ORANGE		
	COPY	BLACK		
	WIDTH	48"		
	HEIGHT	24"		

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
2. LEGEND ON W20-SERIES SHALL INDICATE DISTANCE AS FOLLOWS: 1500 FT 1/2 MILE  
1000 FT 1 MILE  
500 FT AHEAD

EXAMPLE: W20-2a = DETOUR 1500 FT

3. \* DENOTES TYPE V GRADE SHEETING.
4. CONSTRUCTION SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH STD. 24.1.0, 24.2.0 OR 24.3.0.
5. FOR ADDITIONAL SIGNS SEE THE MUTCD.



**NOTES:**

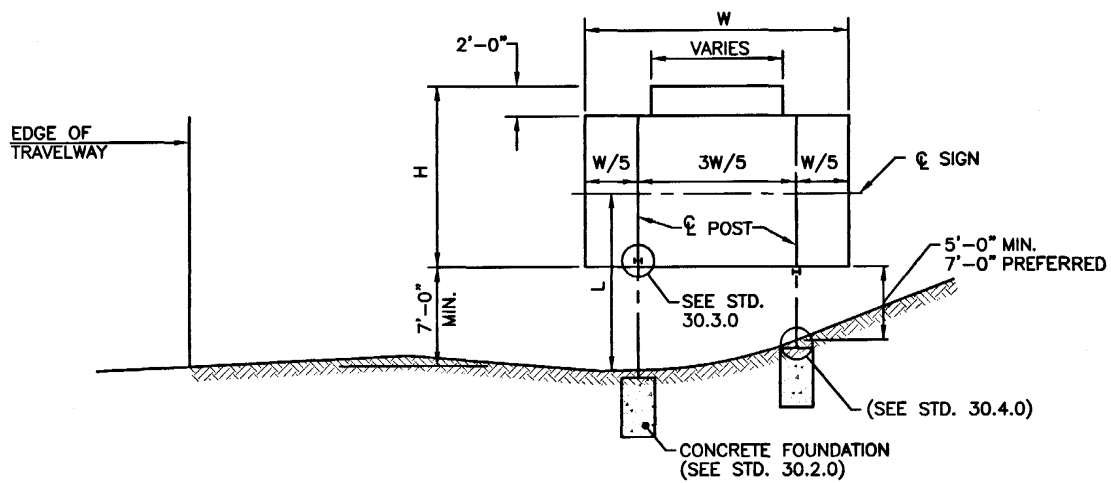
1. SHALL BE IN ACCORDANCE WITH SECTION 922 OF THE R.I. STANDARD SPECIFICATIONS.
2. SIGN SHALL BE 3/4" EXTERIOR MARINE PLYWOOD OR ALUMINUM (THICKNESS = 0.081").
3. SIGN SHALL HAVE A WHITE REFLECTORIZED BACKGROUND WITH A BLUE LEGEND AND LIGHT BLUE STATE SEAL.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

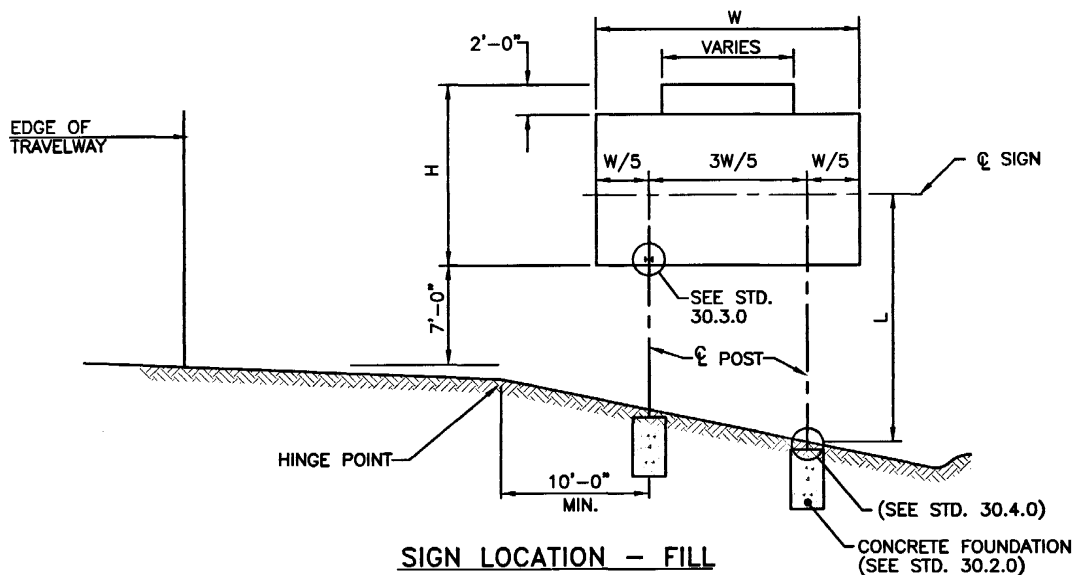
REVISIONS			FIELD OFFICE IDENTIFICATION SIGN		
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE







**SIGN LOCATION - CUT**



**SIGN LOCATION - FILL**

DETERMINE REQUIRED VALUES OF: W = MAXIMUM WIDTH OF SIGN  
H = MAXIMUM HEIGHT OF SIGN  
L = MAXIMUM DISTANCE BETWEEN TOP OF FOOTING AND CENTER LINE OF SIGN

ENTER THE POST SELECTION TABLE WITH MAXIMUM VALUE OF "L" AND  
REQUIRED VALUES OF "W" AND "H" FOR SELECTION OF POST SIGN.  
FOR SIGN SIZES BETWEEN THOSE VALUES OF "W", "H" AND "L"  
IN THE TABLE, USE NEXT HIGHER FOOT VALUE.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**SIGN LOCATION DETAILS  
(SIGNS 6'-0"Wx4'-0"H AND GREATER)**

REVISIONS		
NO.	BY	DATE

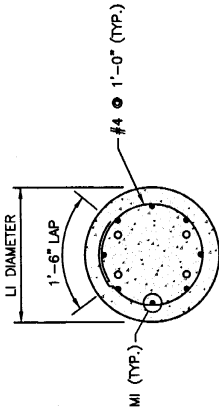
*John A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

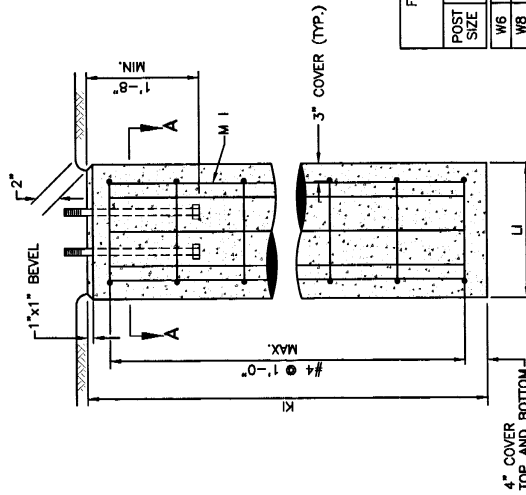
JUNE 15, 1998  
ISSUE DATE







SECTION A-A



SECTION

FOUNDATION SELECTION TABLE FOR BREAK-SAFE SIGNS			
POST SIZE	DIAMETER (L1)	DEPTH FEET (K1)	REINFORCING STEEL (M1)
W6	2.0	5.50	8-#5
W8	2.5	6.00	8-#5
W10	3.0	6.75	8-#6
W12	3.0	7.50	8-#7
W14	3.0	8.00	8-#7

- NOTES:**
- CONTRACTOR SHALL DEVELOP DRAWINGS FOR THE FOUNDATION AND STRUCTURAL SUPPORTS BASED ON THE DATA PROVIDED.
  - FOUNDATION HOLES EXCEPT IN LEDGE, SHALL BE EXCAVATED BY THE AUGER METHOD TO THE NEAT LINES OF THE OUTSIDE DIMENSIONS OF THE FOOTINGS WITHOUT DISTURBING THE SOIL AROUND OR BELOW THE PROPOSED FOOTING.
  - IN AREAS WHERE ROCK OR LEDGE IS ENCOUNTERED, THE BOTTOM OF THE FOOTING SHALL BE PLACED TO THE DESIGN DEPTH SHOWN ON THIS SHEET. THE CONCRETE SHALL FILL THE ENTIRE VOLUME OF THE EXCAVATION TO THE FULL DEPTH OF THE FOOTING.
  - WHERE THE FOUNDATION REQUIRES A SPREAD FOOTING, IT MAY BE PLACED SEPARATELY AND THE PEDESTAL THEN BROUGHT TO GRADE. THE FOOTINGS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER AT THE COST OF THE DESIGN AND CONSTRUCTION OF THE SPREAD FOOTINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  - ANCHOR BOLTS SHALL BE REQUIRED BY THE ENGINEER. SHALL BE GRAVEL BORROW CONFORMING TO THE REQUIREMENTS OF THE R.I. STANDARD SPECIFICATIONS EXCEPT THAT NO STONE LARGER THAN 1 1/2" SHALL BE ALLOWED.
  - WHERE FOOTINGS ARE PLACED AGAINST EMBANKMENTS THE TOP 6" BELOW FINISHED GRADE SHALL BE FORMED.
  - ANCHOR BOLTS SHALL BE SET TO CONFORM WITH THE BASE-PLATE TEMPLATE AS FURNISHED IN CONFORMANCE WITH THE STANDARD PLANS.
  - THE TOP OF THE FOUNDATIONS SHALL BE PROPERLY FINISHED AND DRESSED TO ASSURE THAT FULL BEARING WILL BE PROVIDED ON THE LEVELING NUTS WHICH ARE TO BE SET IN CONCRETE. ALL EXPOSED EDGES SHALL HAVE A 1/2" CHAMFER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

FOUNDATION DETAILS  
(SIGNS 6'-0"Wx4'-0"H AND GREATER)

REVISIONS

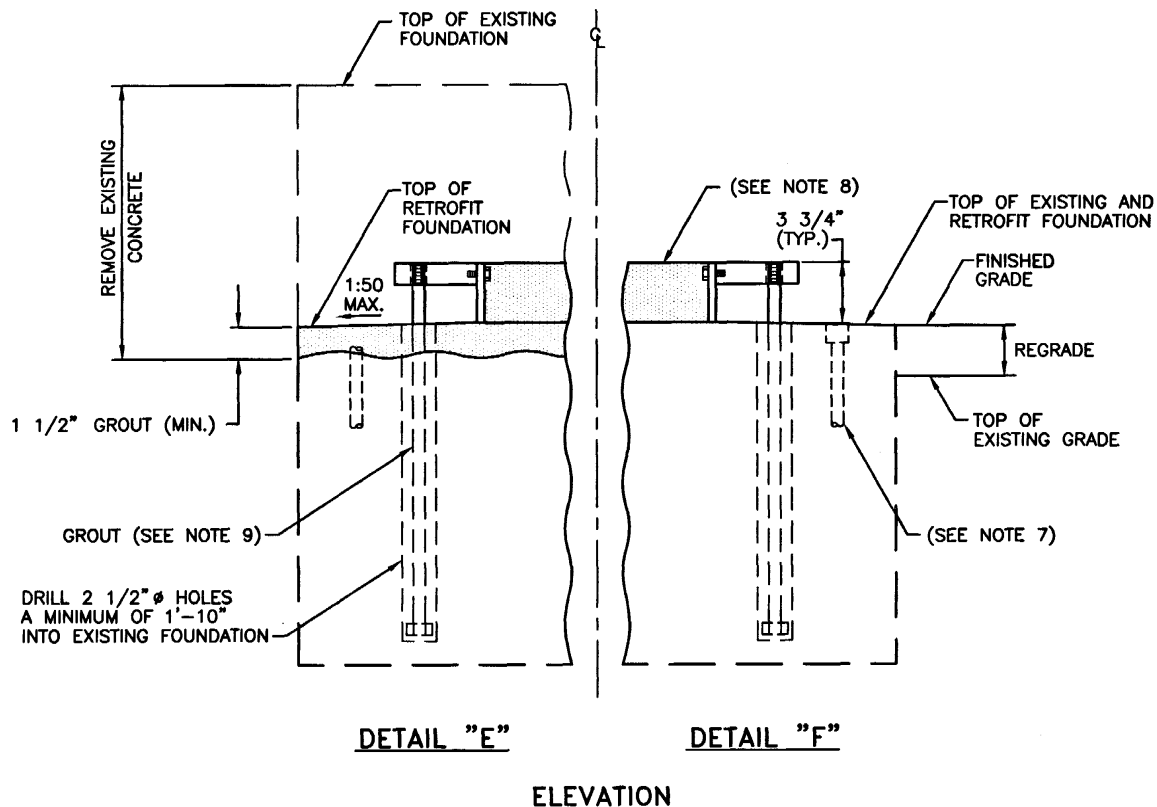
NO. BY DATE

*James L. Gault*  
DESIGNER

*James L. Gault*  
DESIGNER

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
30.2.0



**NOTES:**

1. FOR CONCRETE CLASS, SEE SECTION 601.01.1, TABLE 1 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN EXISTING POST IS ATTACHED TO FOUNDATION BY ANCHOR BOLTS, REMOVE EXISTING ANCHOR BOLTS A MINIMUM OF 1" BELOW TOP OF NEW FOUNDATION. A 3 3/4" DEEP SECTION OF POST SHALL BE USED TO ATTACH THE ANCHOR PLATES. ANY UNCOATED PORTION OF THE SECTION SHALL BE PAINTED WITH AN APPROVED ZINC RICH PAINT.
3. WHEN EXISTING POST IS EMBEDDED IN A FOUNDATION, REMOVE POST APPROXIMATELY 3 3/4" ABOVE TOP OF NEW FOUNDATION, INSTALL ANCHOR PLATES AND PAINT TOP OF POST WITH AN APPROVED ZINC RICH PAINT.
4. AFTER CORRECTLY POSITIONING ANCHOR BOLTS AND ANCHOR PLATES, FILL HOLES WITH NON-SHRINK GROUT.
5. PAINT ANY EXPOSED EXISTING REINFORCING BARS WITH A ZINC RICH PAINT BEFORE APPLYING GROUT.

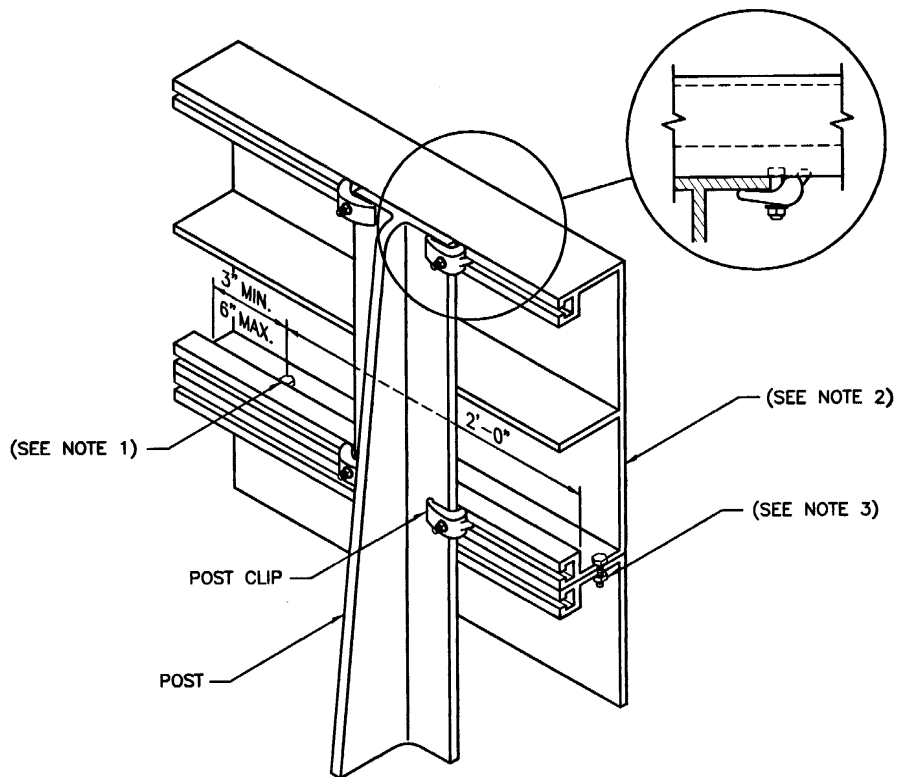
**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			FOUNDATION MODIFICATION FOR RETROFIT (SIGNS 6'-0"Wx4'-0"H AND GREATER)	R.I. STANDARD 30.2.1
NO.	BY	DATE		

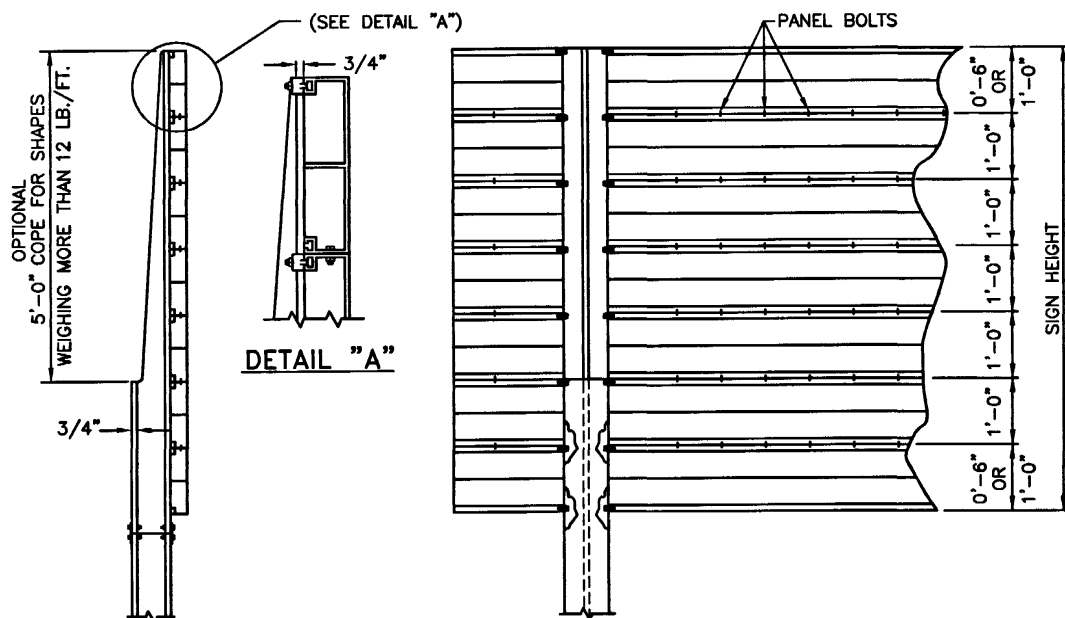
*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



ISOMETRIC SHOWING SIGN COMPONENTS



REAR ELEVATION

SHOWING ARRANGEMENT OF POST CLIPS (BOTH POSTS OR ALL POSTS) AND PANEL BOLTS

NOTES:

1. PANEL HEX BOLT AND WASHER ASTM-B211 ALUMINUM ALLOY 2024-T4 3/4"-16x3/4" LONG.
2. ALUMINUM SIGN PANEL (TYPE B) ALUMINUM ALLOY 6063-T6 ASTM-B221 THICKNESS 0.125".
3. PANEL HEX NUT, ALUMINUM ALLOY 6062-T9 3/8"-16 HEX. HD. NUT ASTM-B211.
4. ALL EXTRUDED ALUMINUM PANELS SHALL HAVE SIDE MOULDINGS.
5. PANEL BOLTS TO BE PLACED SYMMETRICALLY ABOUT C OF SIGN PANEL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SIGN PANEL DETAILS  
(SIGNS 6'-0"Wx4'-0"H AND GREATER)

REVISIONS		
NO.	BY	DATE

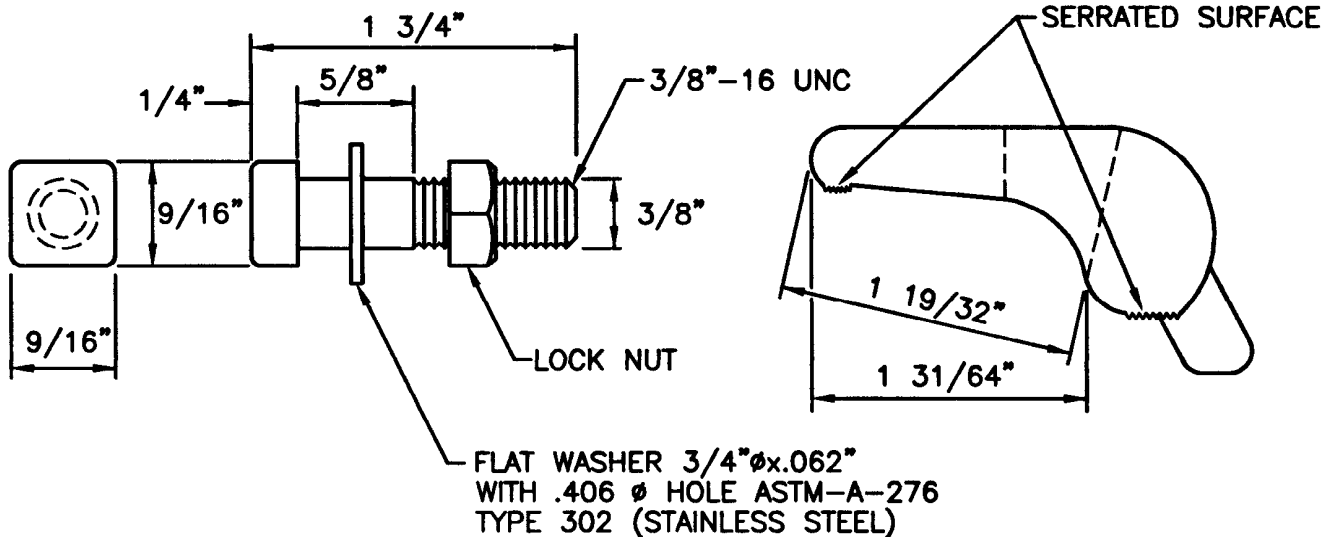
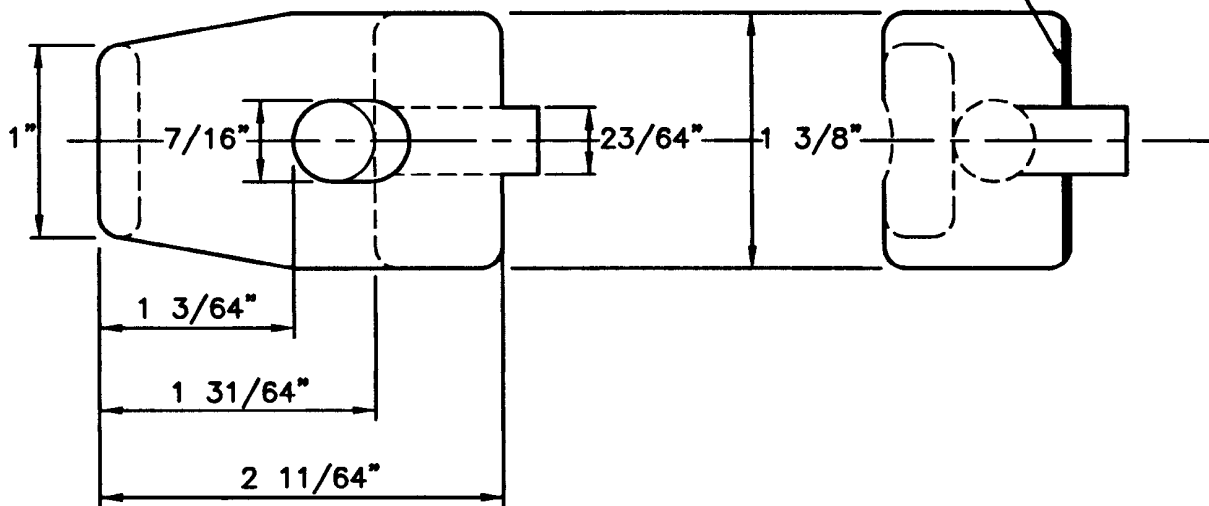
*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
30.3.0

ALUMINUM SHALL HAVE ONE COAT OF  
BITUMINOUS PAINT PER AASHTO SPECIFICATIONS



**NOTES:**

1. BOLT SHALL BE STAINLESS STEEL ALLOY 304 ASTM-A-193-GRADE B8 OR ASTM-A-194-GRADE 8.
2. NUT SHALL BE STAINLESS STEEL ALLOY 303 ASTM-A-193-GRADE B 8F OR OR ASTM-A-194-GRADE 8F.
3. CLIP SHALL BE ALUMINUM ALLOY 356-T6 (SG70A) ASTM-B26.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

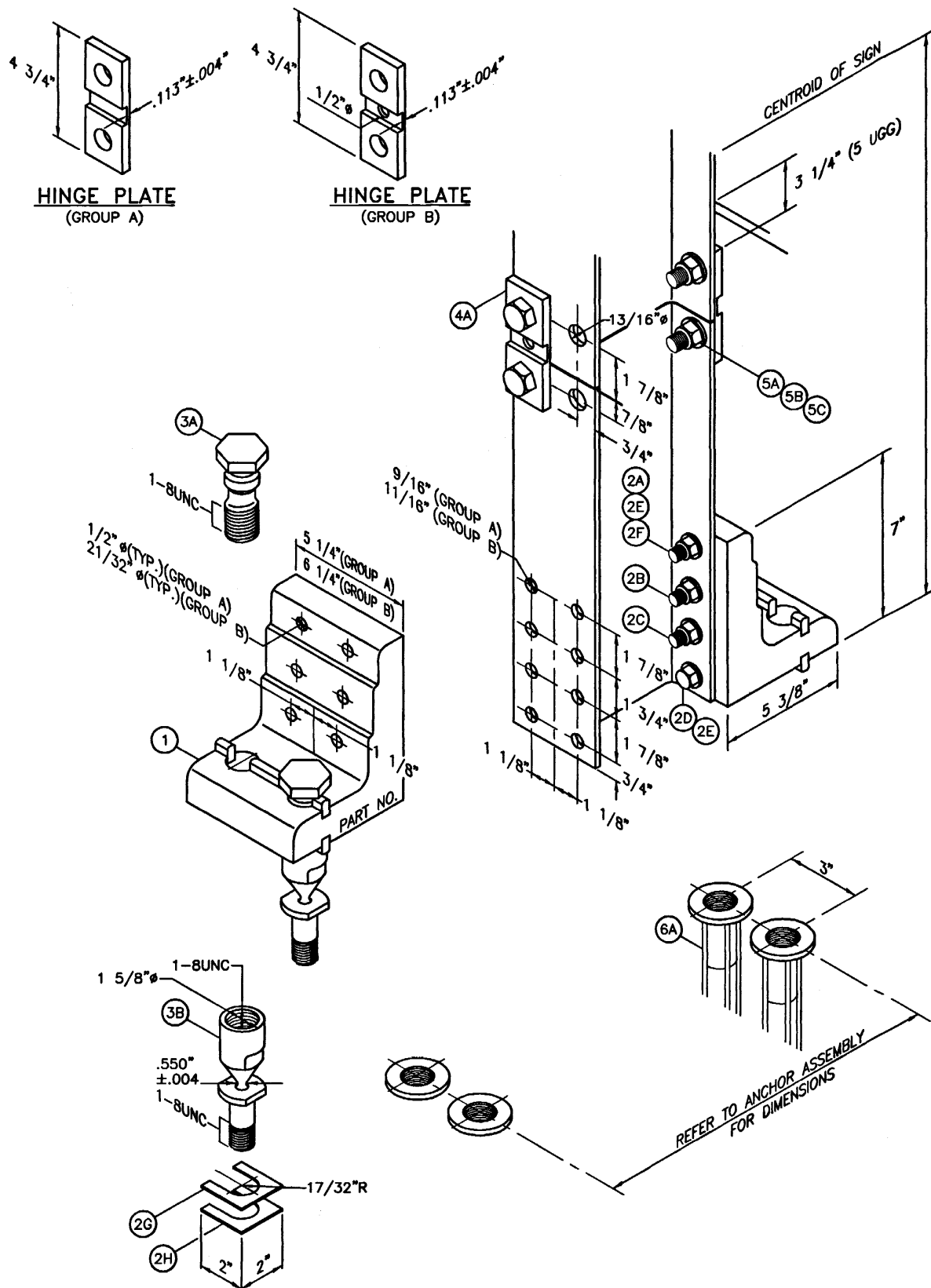
**POST CLIP AND BOLT DETAIL  
(FOR EXTRUDED ALUMINUM)**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**GROUND MOUNTED PRIMARY DIRECTIONAL SIGN POST  
ON BREAKAWAY COUPLINGS**

REVISIONS		
NO.	BY	DATE

*James H. Gault*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
30.4.0





BRACKET SELECTION TABLE									
POST SIZE		#1 E=.100"		#2 E=.150"		#3 E=.200"		#4 E=.250"	
		MIN. L	MAX. L	MIN. L	MAX. L	MIN. L	MAX. L	MIN. L	MAX. L
GROUP A	6 WF 9	12'-2"	25'-0"	8'-7"	12'-1"	6'-7"	8'-6"	--	6'-6"
	6 WF 12	12'-4"	25'-0"	8'-9"	12'-3"	6'-9"	8'-8"	--	6'-8"
	6 WF 15	12'-4"		8'-9"	12'-3"	6'-9"	8'-8"	--	6'-8"
	8 WF 18	14'-1"		10'-0"	14'-0"	7'-9"	9'-11"	--	7'-8"
	8 WF 21	14'-3"		10'-2"	14'-2"	7'-11"	10'-1"	--	7'-10"
GROUP B	10 WF 22	15'-9"	25'-0"	11'-3"	15'-8"	8'-7"	11'-2"	--	8'-6"
	10 WF 26	15'-10"		11'-4"	15'-9"	8'-8"	11'-3"	--	8'-7"
	12 WF 26	17'-6"		12'-6"	17'-5"	9'-7"	12'-5"	--	9'-6"
	14 WF 30	19'-3"		13'-10"	19'-2"	10'-8"	13'-9"	--	10'-7"

BOLT CIRCLE (DIAMETER)		
GROUP A	6 WF 9	15-1/4"
	6 WF 12	15-3/8"
	6 WF 16	15-1/2"
	6 WF 20	15-1/2"
	8 WF 18	17-1/4"
	8 WF 21	17-3/8"
	8 WF 24	17-1/8"
GROUP B	10 WF 22	19-1/2"
	10 WF 26	19-5/8"
	10 WF 30	19-3/4"
	12 WF 26	21-1/2"
	12 WF 30	23-3/16"

#### NOTES:

1. SHALL MEET ALL REQUIREMENTS OF "AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS."
2. ALL HARDWARE (AMERICAN STANDARD) SUPPLIED SHALL BE HOT DIP GALVANIZED PER ASTM A153 OR MECHANICALLY GALVANIZED PER ASTM B695.
3. FASTENERS, EXCEPT FOR SPECIAL BOLT AND COUPLING SHALL BE INSTALLED WITH LOCKWASHERS OR LOCKNUTS AND DO NOT HAVE SPECIFIC TORQUE REQUIREMENTS. FASTNERS SHOULD BE MADE AS TIGHT AS POSSIBLE WITH CONVENTIONAL WRENCHES UNLESS NOTED OTHERWISE.
4. SQUARE AND LEVEL INDIVIDUAL COMPONENTS TO MINIMIZE NEED FOR SHIMMING.
5. STRUCTURAL STEEL TO BE HOT DIP GALVANIZED PER ASTM A123 AFTER FABRICATION.
6. NO MORE THAN TWO SHIMS UNDERNEATH ANY ONE COUPLING AND NO MORE THAN THREE SHIMS UNDERNEATH ANY TWO COUPLINGS.
7. SELECT PROPER POST SIZE BY REFERRING TO POST SELECTION TABLES FOR MEDIUM AND LARGE SIGNS.

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			BRACKET SELECTION TABLE BOLT CIRCLE AND GENERAL NOTES		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>30.4.1</b> </div>	
NO.	BY	DATE				
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">   CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998  ISSUE DATE </div> </div>			

## INSTALLATION NOTES:

WRENCH SIZES REQUIRED: 9/16", 7/8", 1", 1 1/16", 1 1/4", 1 7/16", 1 5/8"

## ANCHOR ASSEMBLY:

1. ASSEMBLE COUPLING ANCHORS 6A TO INSTALLATION TEMPLATE (NOT SHOWN). RIGID STEEL TEMPLATE IS RECOMMENDED.
2. LOWER ENTIRE ANCHOR ASSEMBLY INTO FRESH CONCRETE AND VIBRATE INTO POSITION SO THAT THE TOPS OF THE INDIVIDUAL ANCHORS 6A ARE FLUSH WITH THE FINISHED TOP SURFACE OF THE FOOTINGS.

## BRACKET ASSEMBLY:

1. ASSEMBLE BRACKET TO POST WITH BOLTS PROVIDED.
2. SQUARE AND TIGHTEN. (ITEMS 1, 2A, 2B, 2C, 2D, 2E, AND 2F)




## HINGE ASSEMBLY:

1. BUTT UPPER AND LOWER POSTS TOGETHER ON FLAT SURFACE.
2. PLACE HINGE PLATES 4A ON OUTER FLANGES AND SECURE WITH BOLTS 5A, 5B AND 5C. SNUG BUT DO NOT TIGHTEN.
3. MAKE SURE UPPER AND LOWER POSTS ARE IN ALIGNMENT, THEN TIGHTEN ALL NUTS 5C TO PROOF LOAD (1/2 TURN BEYOND SNUG).

## COUPLING ASSEMBLY:

1. SUSPEND POST OVER FOOTING AND INSERT SPECIAL BOLTS 3A THROUGH BRACKET 1.
2. BELOW BRACKET, THREAD COUPLINGS 3B INTO ANCHORS 6A BUT LEAVE LOOSE.
3. LOWER POST WITH SPECIAL BOLTS 3A ONTO LOOSE COUPLINGS 3B AND THREAD BOLTS INTO COUPLINGS.
4. THREAD COUPLINGS ALL THE WAY IN ANCHORS 6A.
5. TIGHTEN SPECIAL BOLTS 3A. DO NOT PLACE TORQUE ACROSS NECKED DOWN PORTION OF COUPLINGS. WRENCH FLATS ARE PROVIDED ON EITHER SIDE FOR PROPER TIGHTENING.
6. IF POST IS NOT PLUMB, INSERT SHIMS 2G AND 2H BETWEEN COUPLINGS 3B AND ANCHOR 6A.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			INSTALLATION NOTES		
NO.	BY	DATE			
			 CHIEF ENGINEER TRANSPORTATION	 CHIEF DESIGN ENGINEER TRANSPORTATION	JUNE 15, 1998 ISSUE DATE

REVISIONS			BILL OF MATERIALS		
NO.	BY	DATE	ITEM	DESCRIPTION	QTY./POST
			1	BRACKET	2
				6061- T6 ALUMINUM (SEE BRACKET SELECTION TABLE)	
				BRACKET HARDWARE ASSEMBLY:	
			2A	BOLT	4
				GROUP A - 1/2"-13UNC x 2-1/2", HEX HEAD, ASTM A325, GALV., ASTM A153	
			2B	BOLT	4
				GROUP B - 5/8"-11UNC x 2-3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
				GROUP A - 1/2"-13UNC x 2-3/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
			2C	BOLT	4
				GROUP B - 5/8"-11UNC x 3", HEX HEAD, ASTM A325, GALV., ASTM A153	
				GROUP A - 1/2"-13UNC x 3", HEX HEAD, ASTM 325, GALV., ASTM 153	
			2D	CAP SCREW	4
				GROUP B - 5/8"-11UNC x 3-1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
				GROUP A - 1/2"-13UNC x 1-1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	
			2E	LOCKWASHER	4
				GROUP B - 1/2"-13UNC x 1-1/4", HEX HEAD, ASTM A307, GALV., ASTM A153	
				GROUP A - 1/2", ANSI B18-21-1, GALV., ASTM A153	16
				GROUP B - 5/8", ANSI B18-21-1, GALV., ASTM A153	16
			2F	NUT	2
				GROUP A - 1/2"-13UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	
				GROUP B - 5/8"-11UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A1531	2
			2G	SHIM	2
				GROUP A - 21" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	
				GROUP B - 1" HORSESHOE, 18 GAUGE, GALV., STEEL SHEET	2
			2H	SHIM	2
				1" HORSESHOE, 14 GAUGE, GALV., STEEL SHEET	
				COUPLING AND BOLT ASSEMBLY:	
			3A	SPECIAL BOLT	4
				1"-8 UNC ASTM A449, GALV., ASTM A153/B695	
			3B	COUPLING	4
				1"-8 UNC LP., AMS 63780, GALV., ASTM A153, POLYESTER COAT **	
				HINGE ASSEMBLY:	
			4A	HINGE PLATE	4
				GROUP A - TYPE B525, AISI A130 STEEL, GALV., ASTM A123	
				GROUP B - TYPE B650, AISI 4130 STEEL, GALV., ASTM A123	4
				HINGE HARDWARE ASSEMBLY:	
			5A	BOLT	8
				3/4"-10UNC x 2-1/4", HEX HEAD, ASTM A325, GALV., ASTM A153	
			5B	LOCKWASHER	8
				3/4" ANSI B18-21-1, GALV., ASTM A153	
			5C	NUT	8
				3/4"-10UNC, HEAVY HEX, ASTM A563, GR. DH, GALV., ASTM A153	
				ANCHOR ASSEMBLY:	
			6A	ANCHOR	4
				GROUP A - 1"-8UNC, 304 S.S. FERRULE, AISI 1038 ROD, AISI 1008 COIL	
				GROUP B - 1"-8UNC, 304 S.S. FERRULE, AISI 1008 COIL	4

\*WITH EXCEPTION TO DECARBURIZATION AND MACROSTRUCTURE CLAUSES

\*\*2-4 MIL. THICK MORTON POWDER COATINGS' 20-7037 POLYESTER POWDER COAT

**BILL OF MATERIALS**

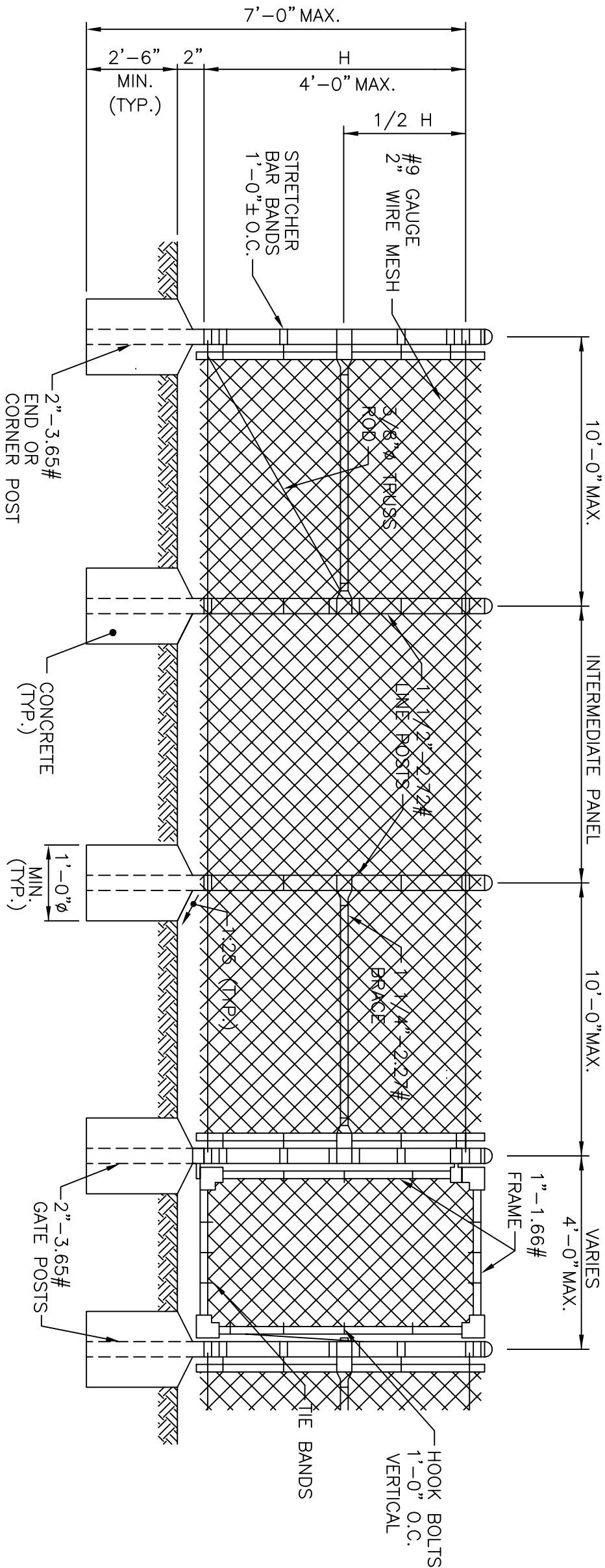
RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHIEF ENGINEER  
TRANSPORTATION

CHIEF DESIGN ENGINEER  
TRANSPORTATION

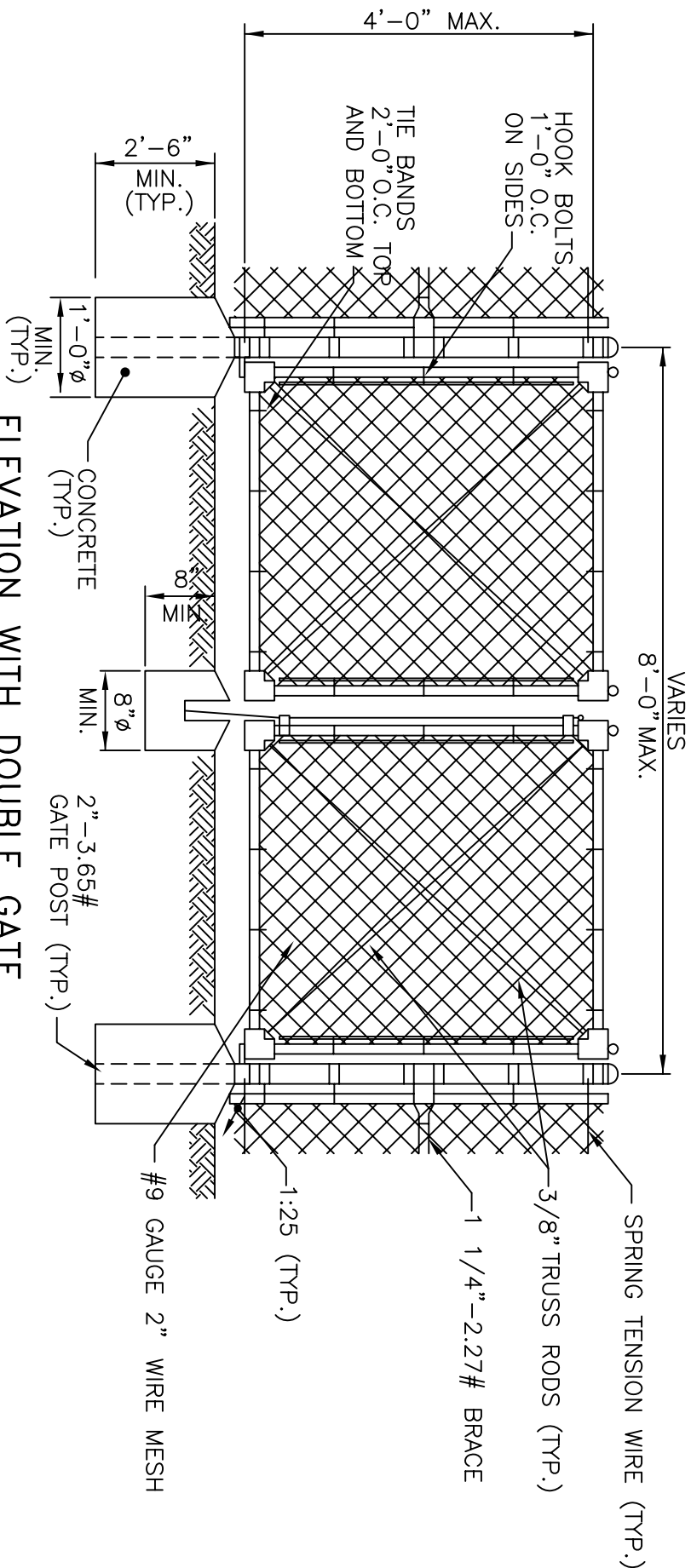
ISSUE DATE  
JUNE 15, 1998





ELEVATION WITH SINGLE GATE

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
  2. INTERMEDIATE POSTS REQUIRED EVERY 200'-0".
  3. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.



ELEVATION WITH DOUBLE GATE

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE  
3'-0" TO 4'-0"

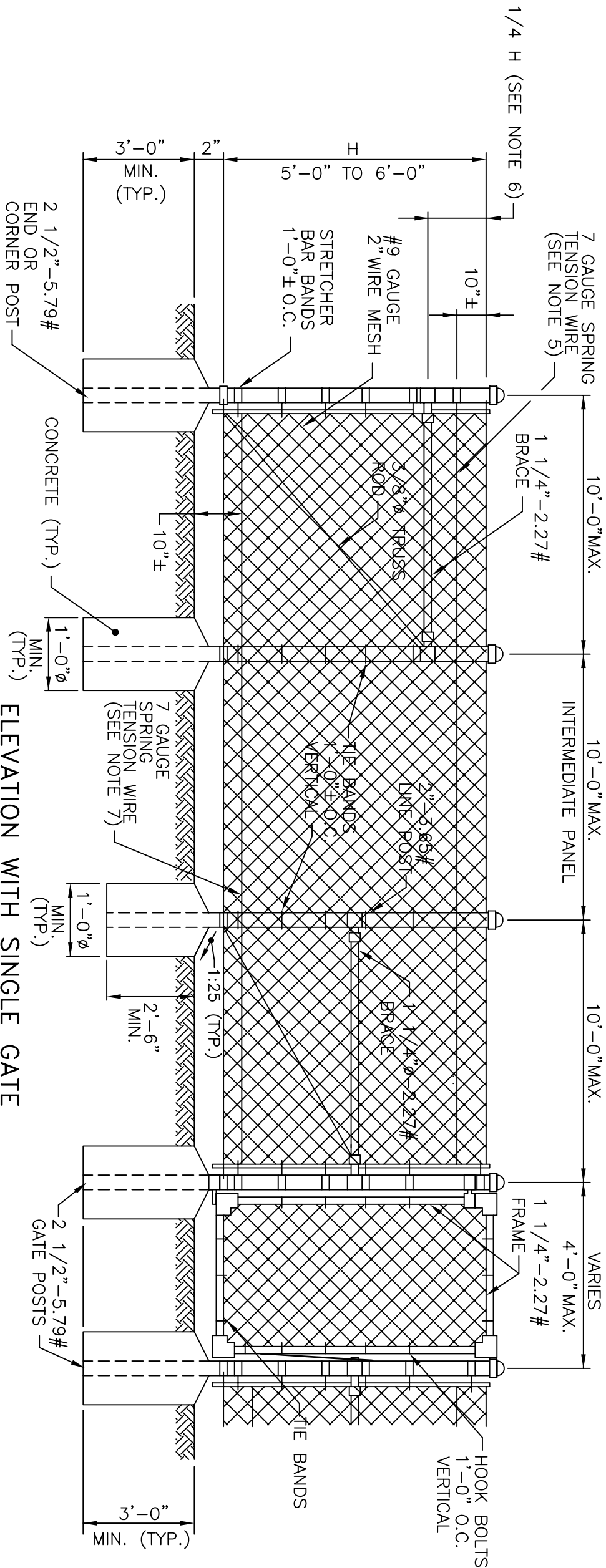
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





NOTES:

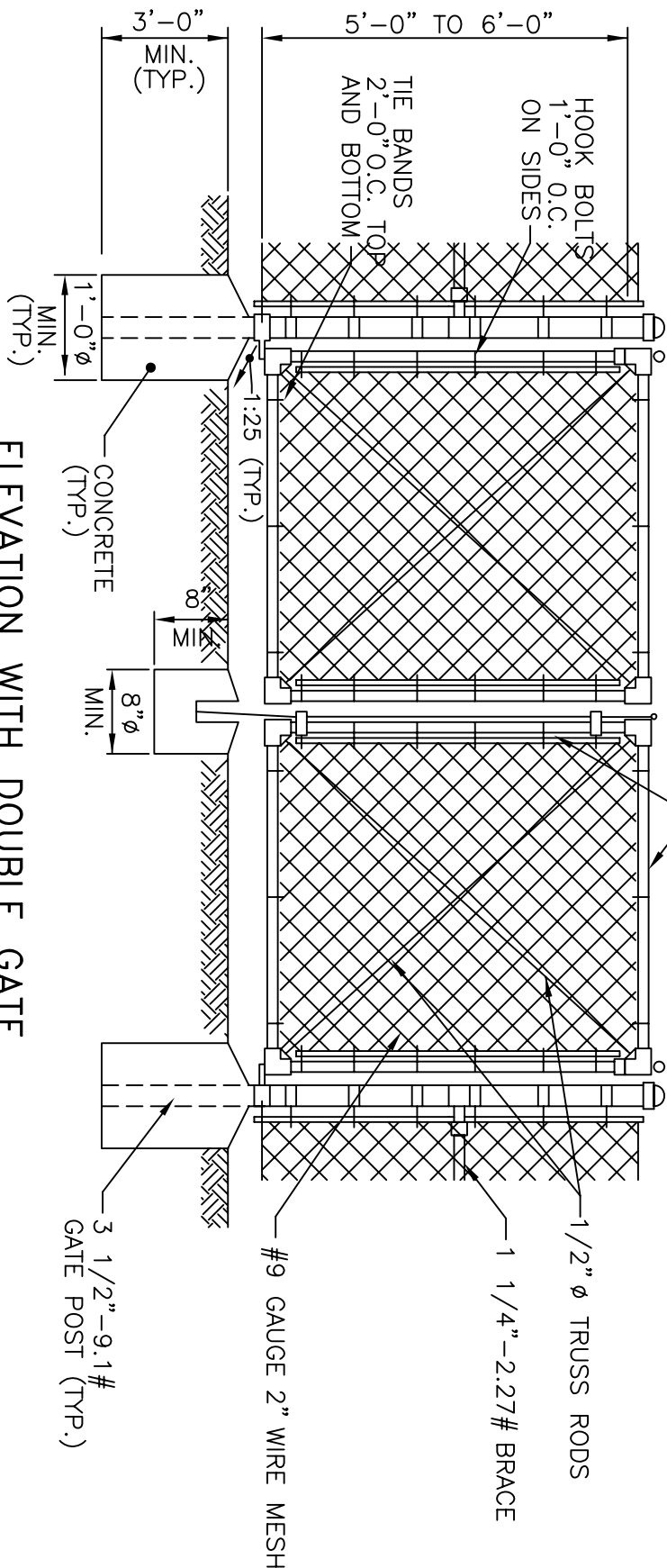
1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. 6 GAUGE STREET CLIPS TO BE USED TO FASTEN SPRING TENSION WIRE TO LINE POST.
3. SPRING TENSION WIRE – NO. 7 GAUGE CORRUGATED HEAVILY GALVANIZED (2.0 OZ. PER SQ. FT.) ALUMINUM COATED (0.4 OZ. PER SQ. FT.)
4. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.
5. A 1 1/4\"-2.27# TOP RAIL MAY BE SUBSTITUTED FOR THE TOP TENSION WIRE WHEN THE FENCE IS NOT LOCATED IN THE CLEAR ZONE.
6. WHEN A TOP RAIL IS USED, LOCATE THE BRACE RAIL AT 1/2 H.
7. THE BOTTOM SPRING TENSION WIRE.

ELEVATION WITH SINGLE GATE

VARIES

12'-0" MAX.

1 1/2\"-2.27# FRAME (TYP.)



ELEVATION WITH DOUBLE GATE

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CHAIN LINK FENCE  
5'-0" TO 6'-0"

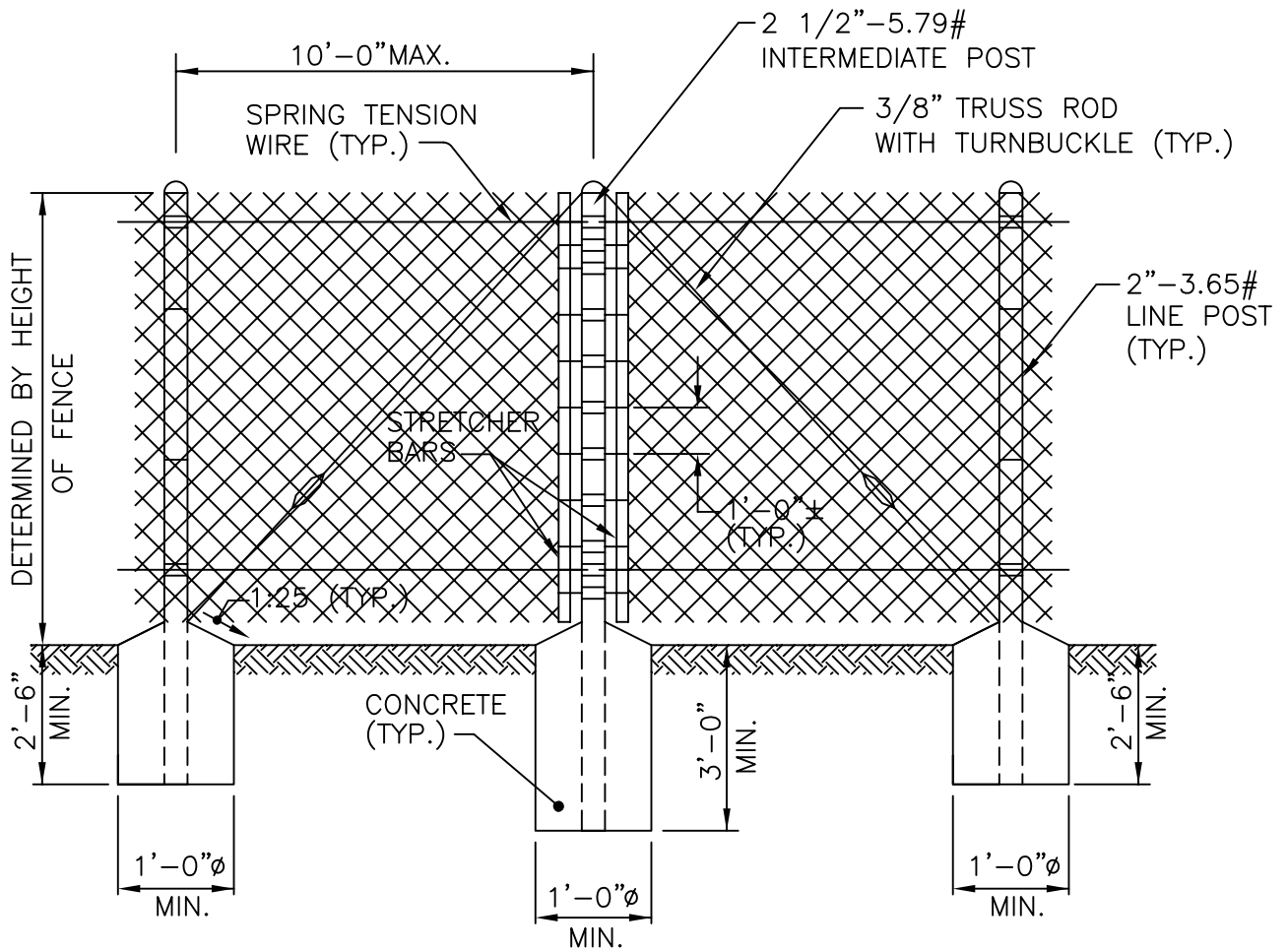


JUNE 15, 1998  
ISSUE DATE

Edmund J. Parker Jr.  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

James H. Casabelli  
CHIEF ENGINEER  
TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
2. INTERMEDIATE POSTS REQUIRED EVERY 200'-0".
3. ALL PIPES REFER TO SCHEDULE 40 NOMINAL PIPE SIZES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CHAIN LINK FENCE 5'-0" TO 6'-0"  
INTERMEDIATE POST**

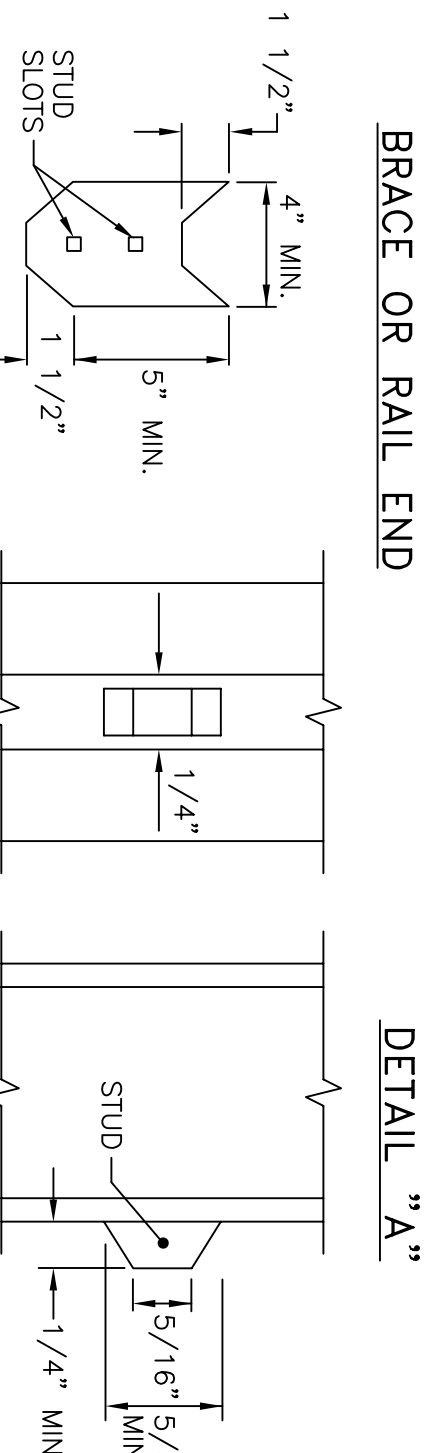
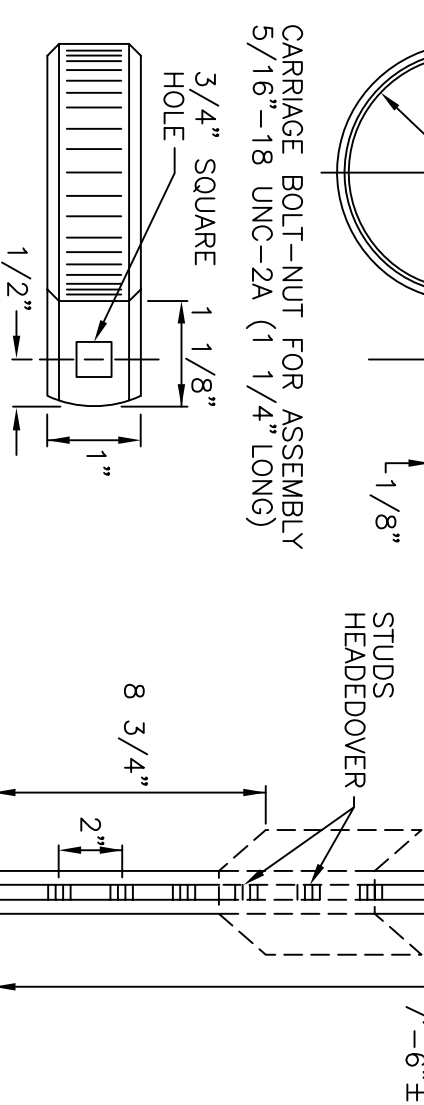
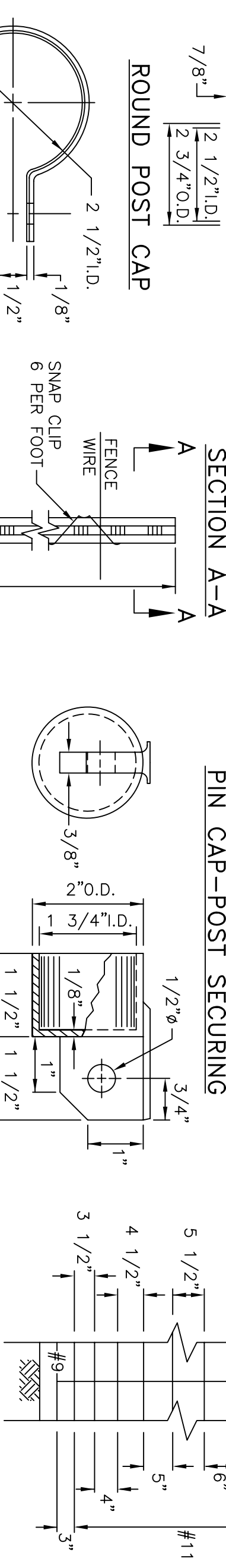
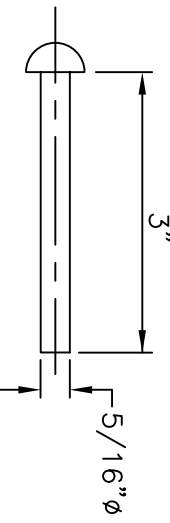
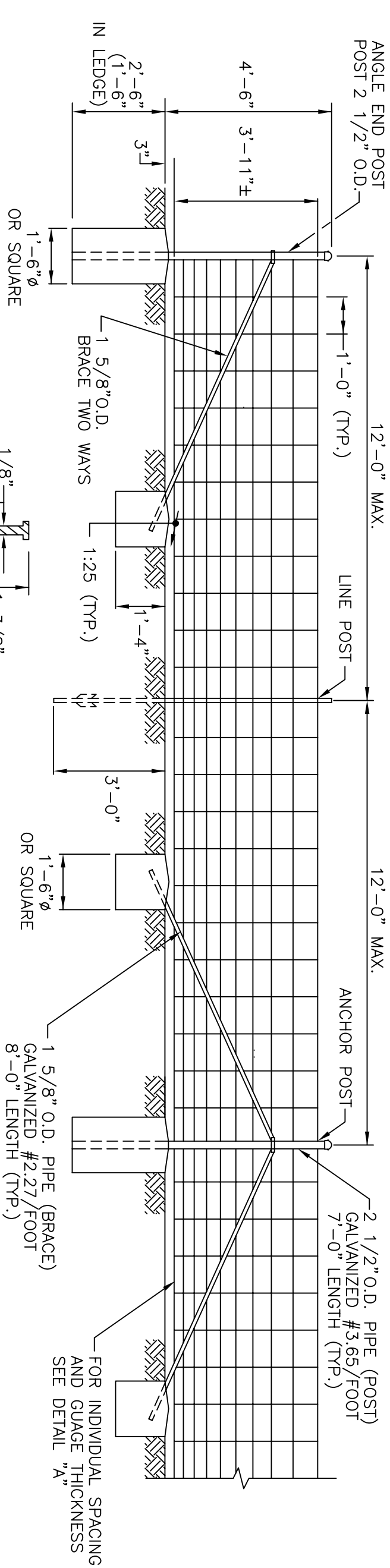
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

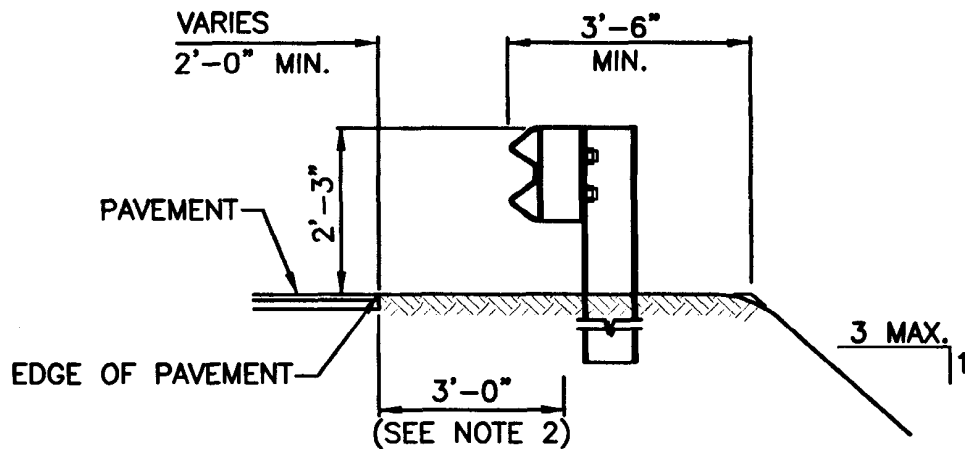
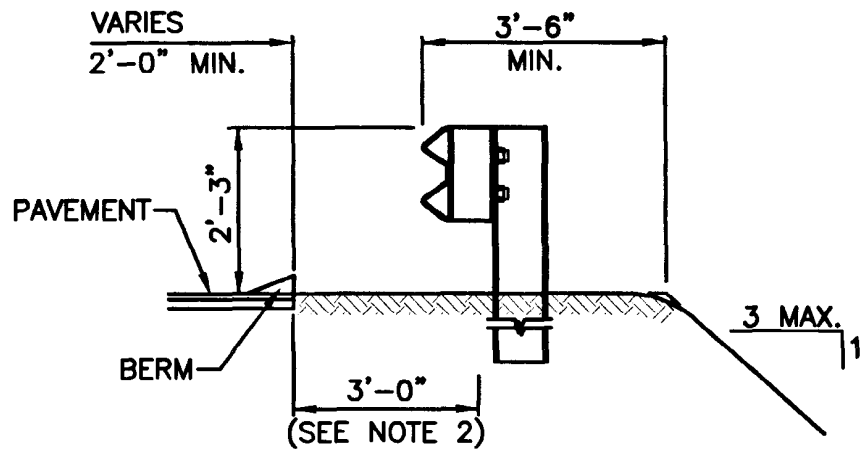
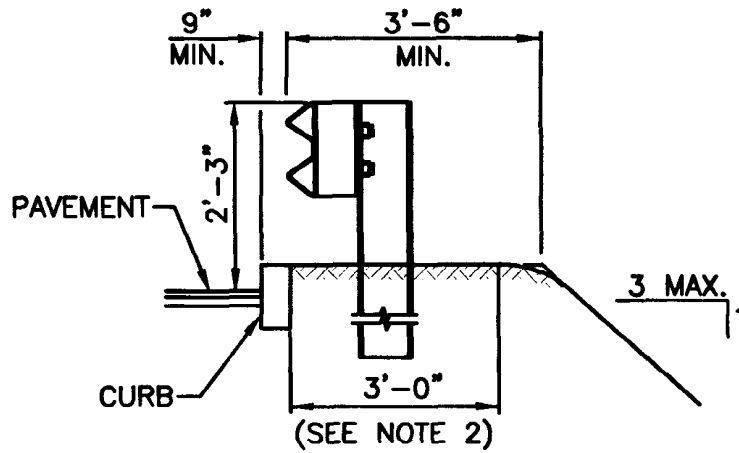
*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 903 OF THE R.I. STANDARD SPECIFICATIONS.
  2. CONNECT LINE BRACE AT ALL SAG - SUMMIT, IN LONG EVEN RUNS, BRACE EVERY 15 BAYS WITH NEAR BRACE POSTS 180'-0" C-C.
  3. CAP TO BE SECURED TO PIPE POST WITH 5/16" PIN, PEENED TO HOLD, IN FIELD OR PREASSEMBLED.
  4. THE BULB STUD TEE (1 3/8"x1 1/4"x1/8", 1.33 LB./FT.) IS AN ACCEPTABLE SUBSTITUTION.
  5. ALL POSTS, FENCES, FIXTURES TO BE GALVANIZED. FIXTURES ARE AS SHOWN OR EQUIVALENT.



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TREAT THIS AREA WITH HERBICIDE AFTER THE GUARD RAIL INSTALLATION AS REQUIRED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

**TYPICAL GUARDRAIL INSTALLATION**

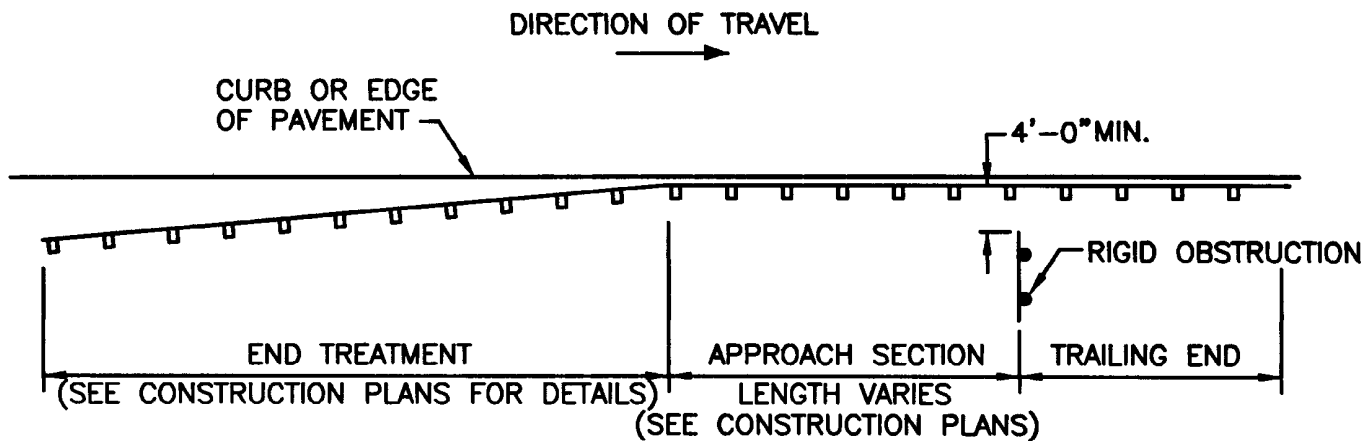
*James H. Casale*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

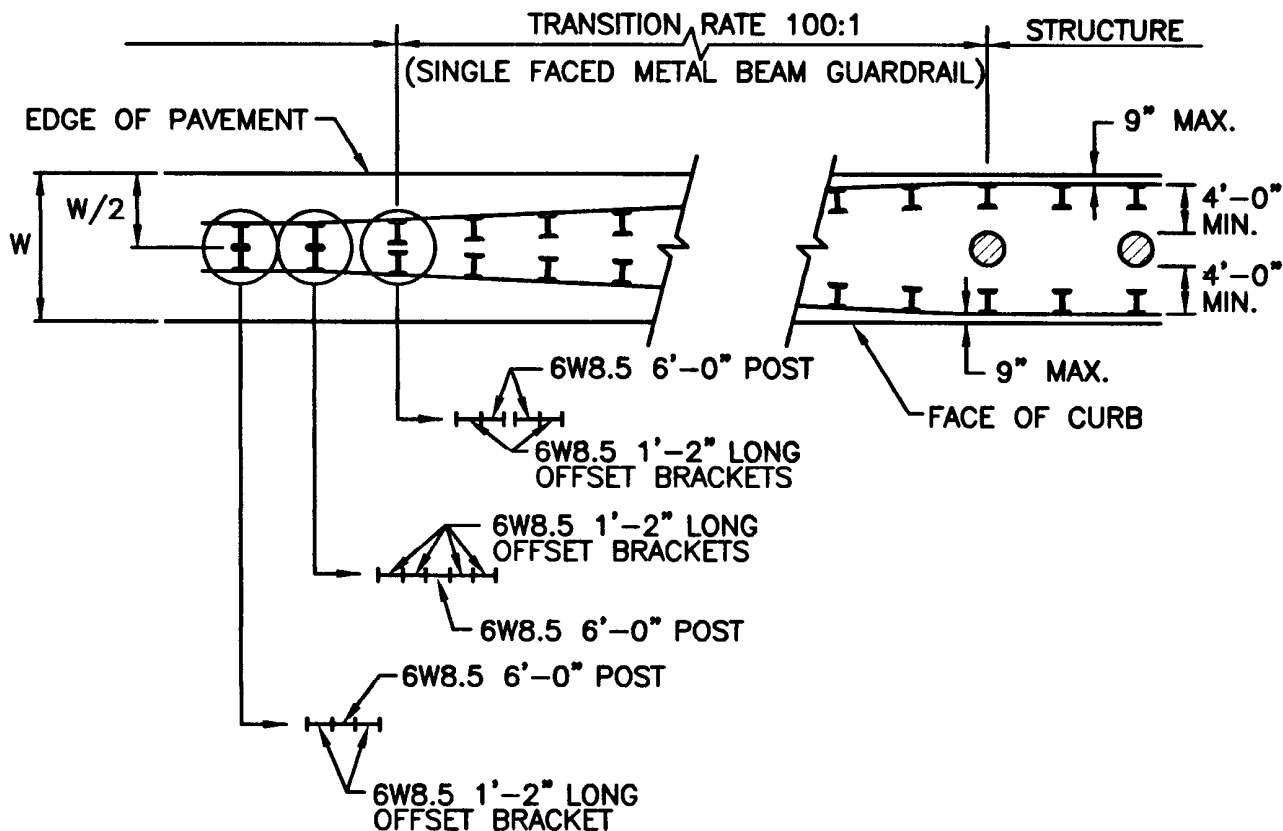






NOTE: THIS DETAIL IS ONLY APPLICABLE IF OBSTRUCTION IS LESS THAN 30'-0" FROM THE EDGE OF THE TRAVEL LANE.

### DETAIL AT ROADSIDE OBSTRUCTION



### DETAIL AT PIERS

NOTE:  
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

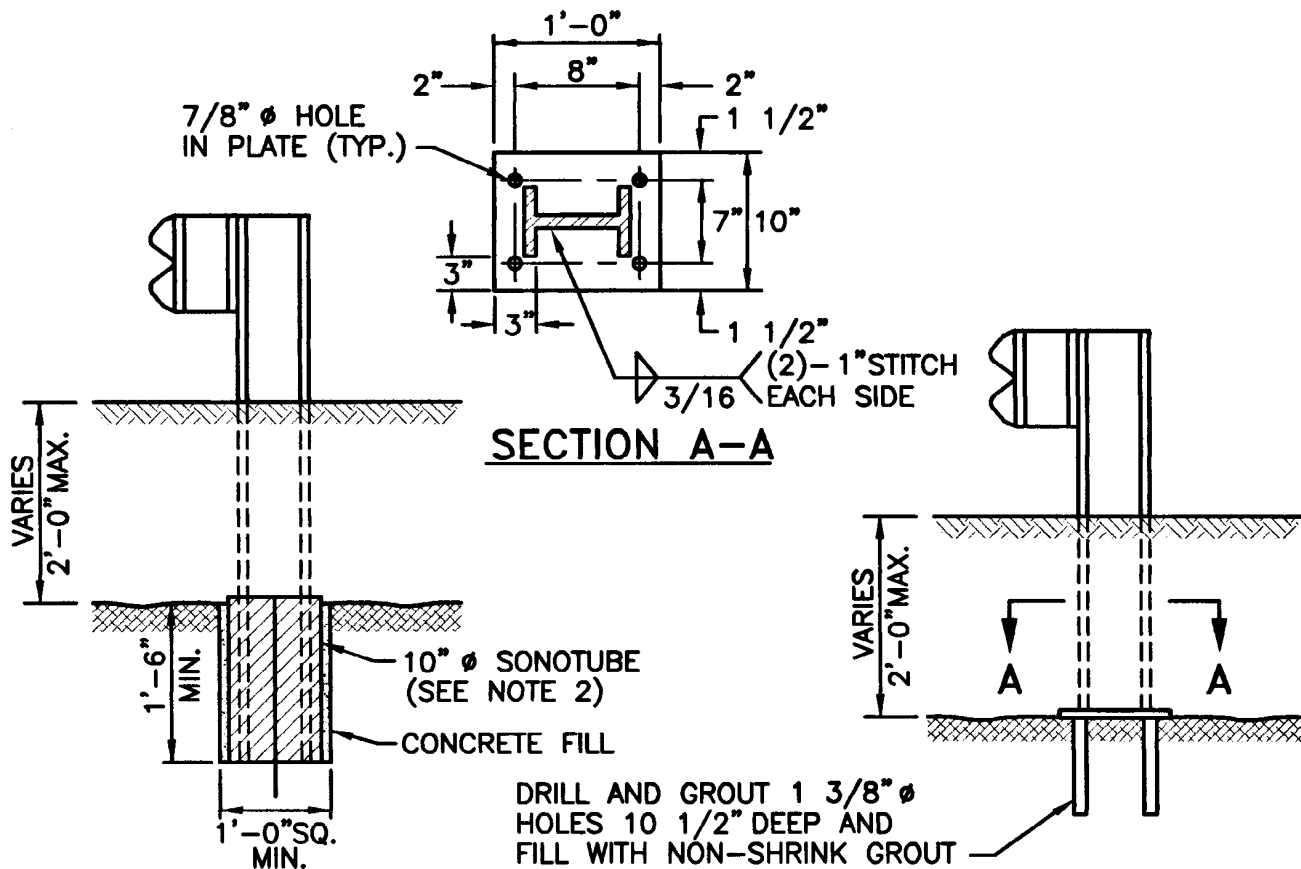
### TYPICAL GUARDRAIL INSTALLATION AT STRUCTURES

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
34.1.1



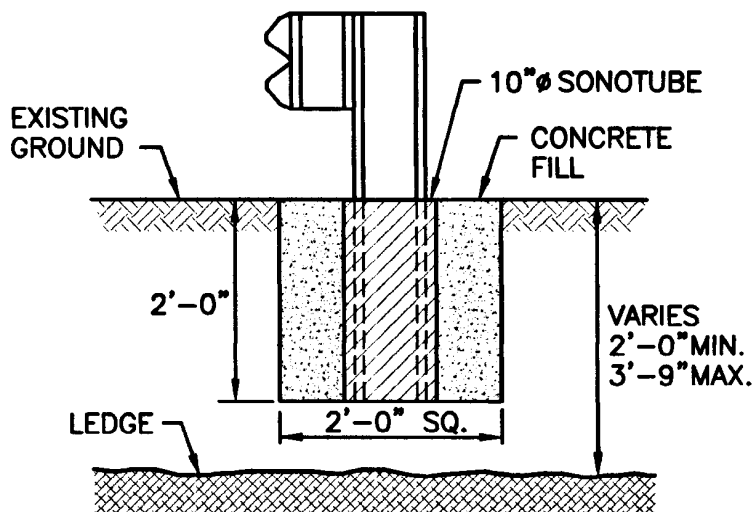
**SOFT TO MEDIUM LEDGE**

**HARD LEDGE**

**LEDGE 0'-0" TO 0'-2" BELOW GROUND**



**NOTES:**

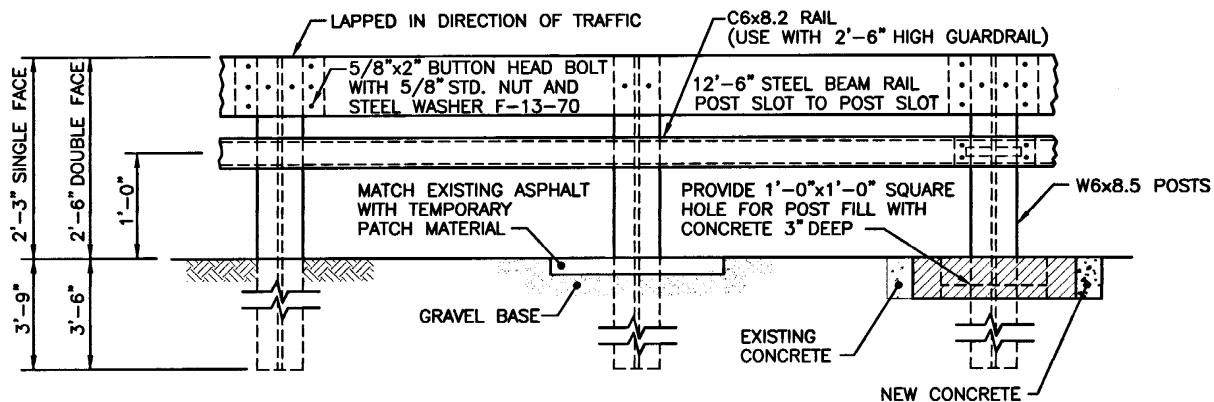
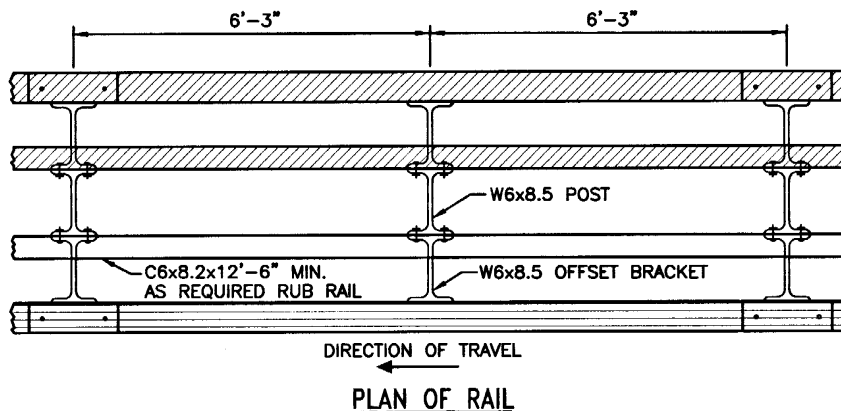
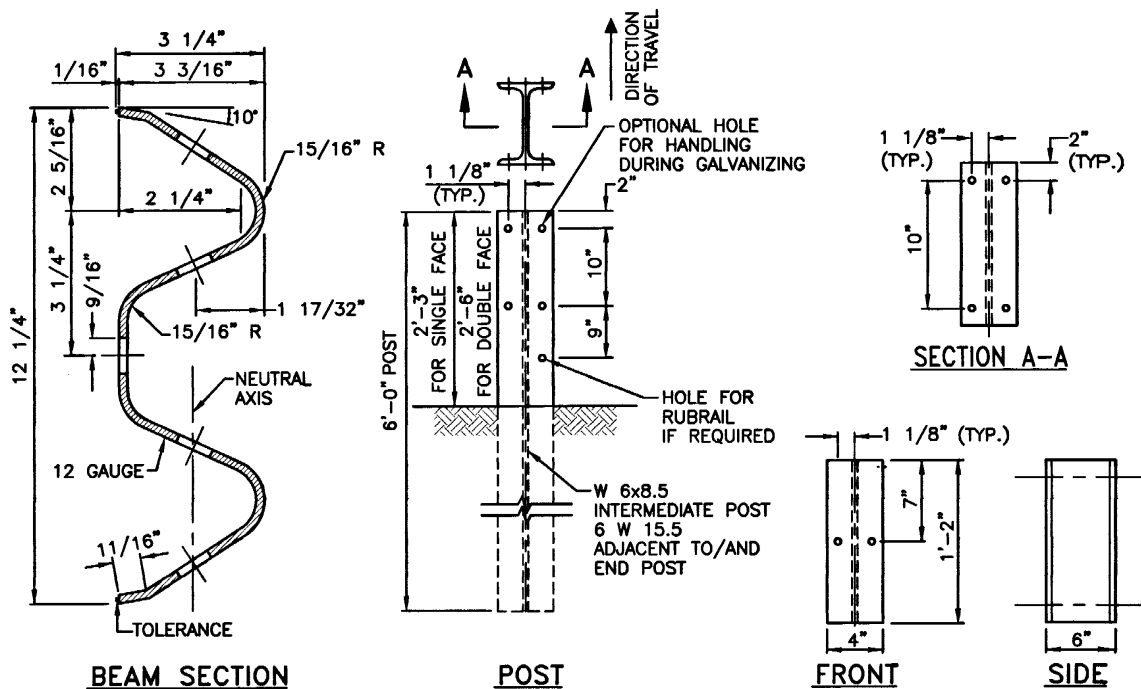
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. A 10"  $\phi$  DRILLED HOLE 1'-6" DEEP IS AN ACCEPTABLE SUBSTITUTE.
3. WET SAND FILL, HAND COMPACTED SHALL BE USED TO BACKFILL SONOTUBE AFTER INSERTING GUARDRAIL POST.



**LEDGE 2'-0" TO 3'-9" BELOW GROUND**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			TYPICAL GUARDRAIL POST INSTALLATION IN LEDGE		<div><div>R.I. STANDARD 34.1.2</div></div>
NO.	BY	DATE			
			<div><div><div> CHIEF ENGINEER TRANSPORTATION</div><div> CHIEF DESIGN ENGINEER TRANSPORTATION</div><div>JUNE 15, 1998 ISSUE DATE</div></div></div>		



NOTE: DEPRESSION TO BE FILLED WITH CORRESPONDING MATERIAL

### ELEVATION OF RAIL

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
1. POST AND OFFSET BRACKET TO BE FABRICATED FROM 6"x4" 8 1/2 LBS/FT. STEEL "H" SECTIONS.
2. POST AND BRACKET BOLT HOLES TO BE OVAL UNLESS OTHERWISE SPECIFIED.
4. ALL HOLES IN OFFSET BRACKETS SHALL BE 13/16".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### STEEL BEAM GUARDRAIL

REVISIONS  
NO. BY DATE

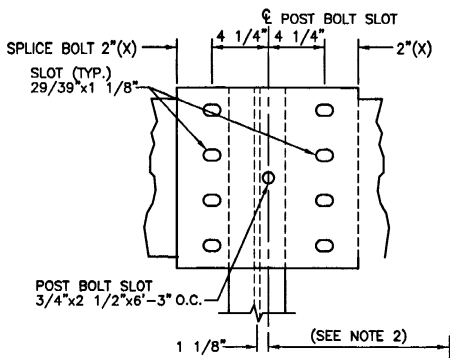
NO.	BY	DATE

*James A. Gault*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Porter Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

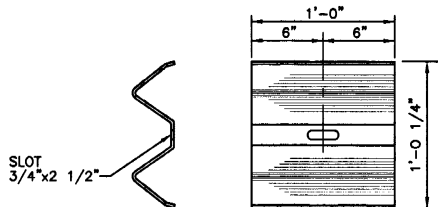
R.I.  
STANDARD  
34.2.0



NOTES:

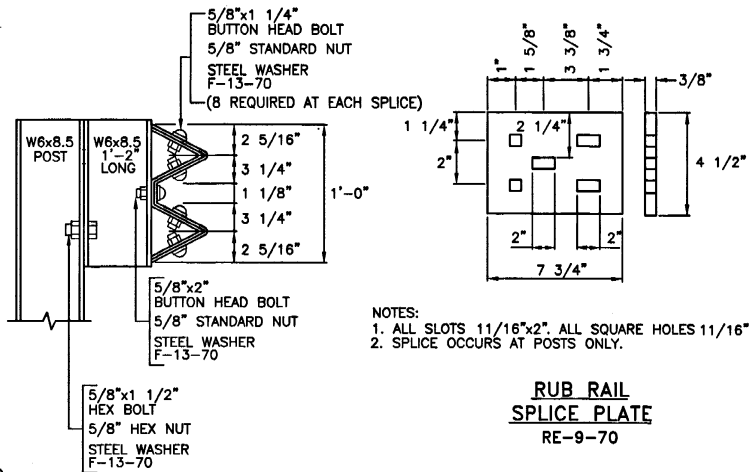
1. (X) TOLERANCE  $\begin{cases} +1 \frac{1}{4}" \\ -1 \frac{1}{4}" \end{cases}$
2. END POST BOLT SLOTS 12'-0" O.C.  
INTERMEDIATE POST SLOT 6'-3" O.C. (UNLESS OTHERWISE NOTED)

SPlice DETAIL



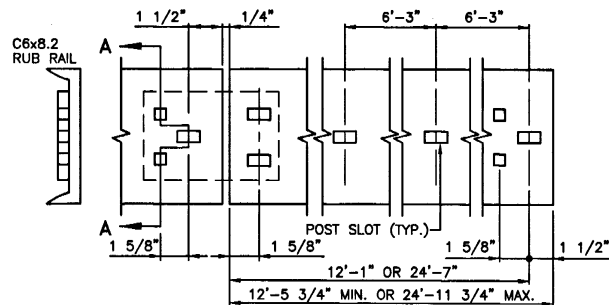
NOTE: THIS BACK-UP PLATE IS PLACED BEHIND RAIL ELEMENTS AT INTERMEDIATE (NON-SPLICE) POSTS.

BACK-UP PLATE



NOTE:  
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

SECTION



SECTION A-A

RUB RAIL

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL DETAILS

REVISIONS  
NO. BY DATE

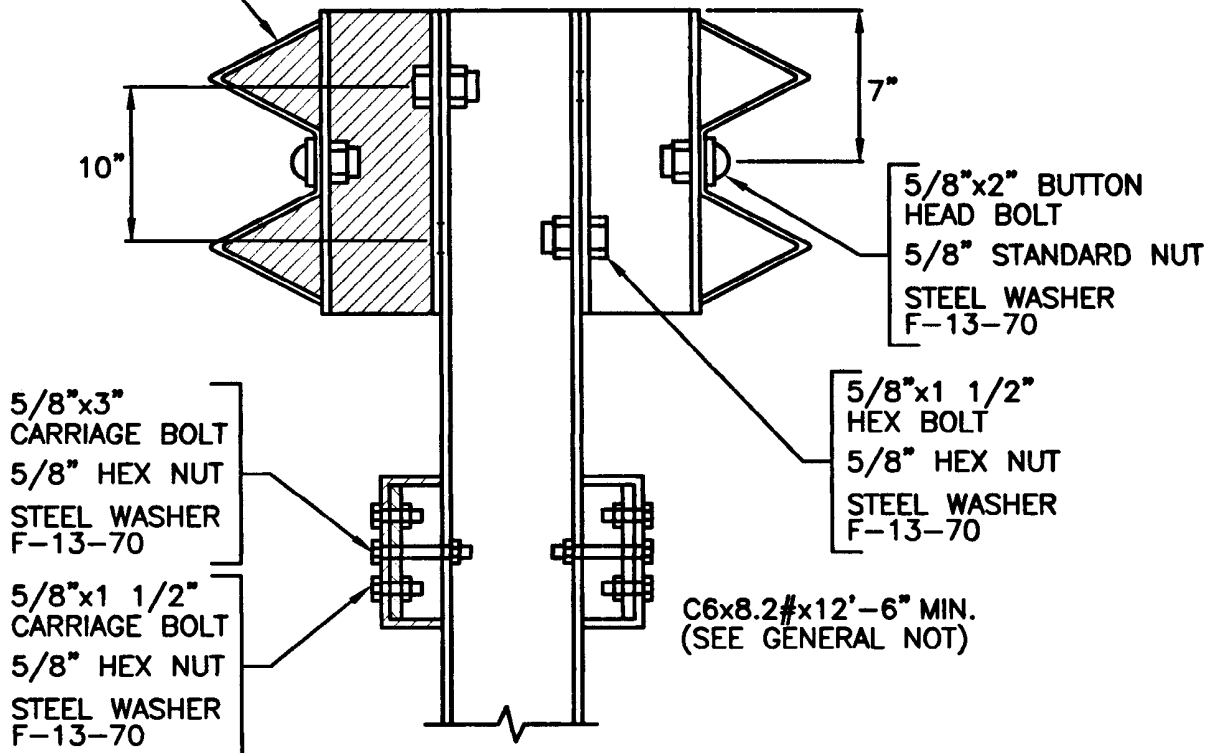
CHIEF ENGINEER  
DEPARTMENT OF TRANSPORTATION

CHIEF DESIGN ENGINEER  
DEPARTMENT OF TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I. STANDARD  
34.2.1

METAL BEAM RAIL



**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.
3. AFTER GALVANIZING THE NUT SHALL BE FREE RUNNING ON THE BOLT.
4. THE RAIL ELEMENT SHALL BE SHOP CURVED WHEN THE PLACEMENT OF GUARDRAIL IS ON A CURVE HAVING A RADIUS OF 150'-0" OR LESS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STEEL BEAM GUARDRAIL  
DOUBLE FACED ASSEMBLY**

REVISIONS		
NO.	BY	DATE

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

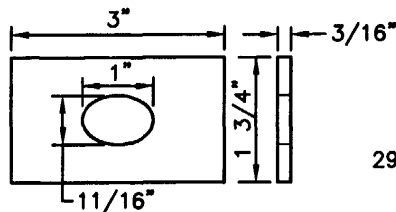
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

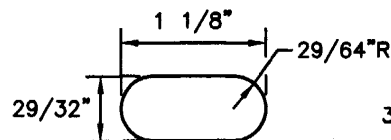


NOTE:  
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

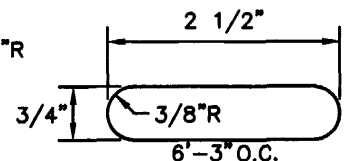
BOLT SELECTION TABLE				
INTENDED USE	BOLT TYPE	L	THREAD LENGTH	NUT TYPE
AS SPLICE ON "W" BEAM GUARD RAIL	5/8" Ø BUTTON HEAD	1 1/4"	FULL	5/8" Ø STANDARD
FOR FASTENING "W" BEAM RAIL TO STEEL POSTS OR BRACKET	5/8" Ø BUTTON HEAD	2"	1 1/2" MIN.	5/8" Ø STANDARD
AS SPLICE BOLT FOR CHANNEL RUB RAIL ELEMENTS USED IN "W" BEAM GUARD RAIL	5/8" Ø CARRIAGE HEAD	1 1/4"	FULL	5/8" Ø HEX
FOR FASTENING CHANNEL RUB RAIL ELEMENTS TO STEEL POSTS IN "W" BEAM GUARD RAIL	5/8" Ø CARRIAGE HEAD	3"	1 1/2" MIN.	5/8" Ø HEX
FOR FASTENING STEEL BLOCK TO STEEL POSTS	5/8" Ø HEX	1 1/2"	FULL	5/8" Ø HEX



RECTANGULAR  
PLATE WASHER F-12-70



SPLICE BOLT  
SLOT



POST BOLT SLOT

NOTE: USE ONLY AT 8th POST ON STD. 34.3.1

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BEAM GUARDRAIL FIXTURES

REVISIONS

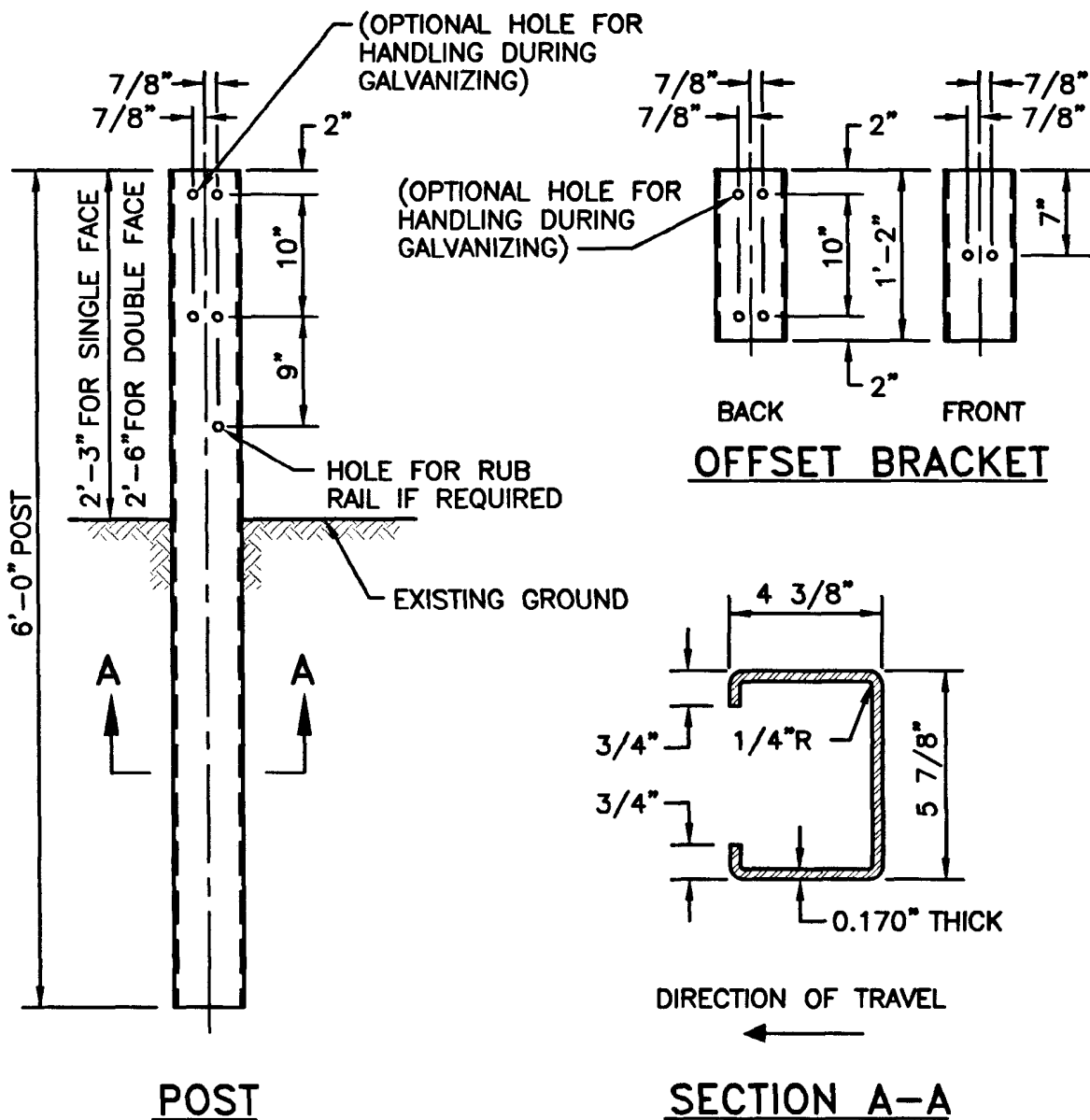
NO. BY DATE

CHIEF ENGINEER  
TRANSPORTATION

CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL HOLES TO BE 13/16" Ø.
3. ONLY ONE TYPE OF POST SHALL BE USED IN A SINGLE RUN. OPEN SIDE SHALL FACE AWAY FROM DIRECTION OF ONCOMING TRAFFIC.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

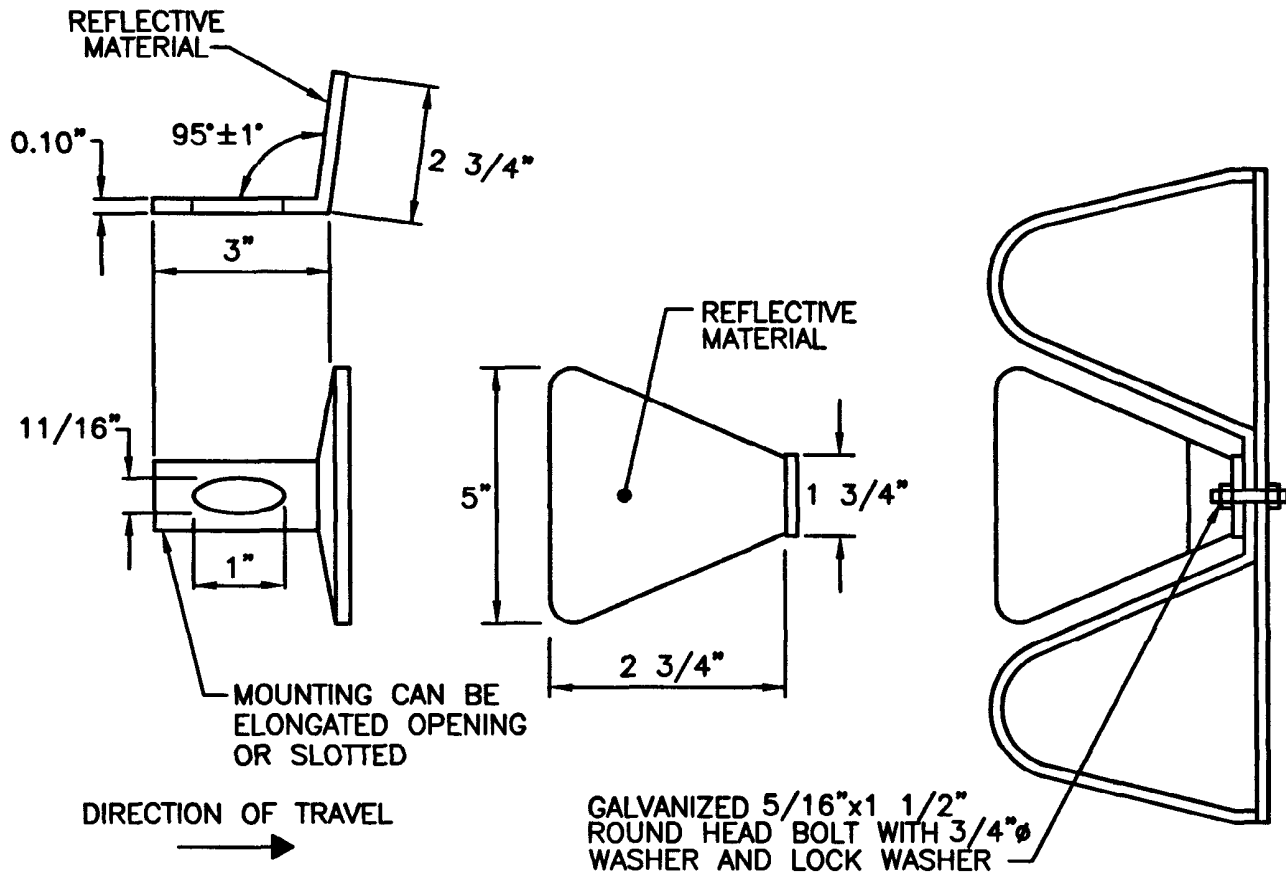
**STEEL BEAM GUARDRAIL POST  
AND OFFSET BRACKET "C" SECTION**

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. REFLECTIVE MATERIAL SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER.
3. SILVER REFLECTORS SHALL BE INSTALLED ON THE RIGHT SIDE OF THE ROAD AND AMBER ON THE LEFT, IN ACCORDANCE WITH MUTCD GUIDELINES FOR PAVEMENT EDGELINE MARKINGS.
4. THE REFLECTORIZED ALUMINUM WASHER IS TO BE PLACED IN VALLEY OF BEAM WHEN MOUNTING BEAM ONTO EACH SIXTH POST.
5. REFLECTORIZED GALVANIZED WASHERS MAY BE USED AS AN OPTION.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR		<div><div>R.I. STANDARD 34.2.5</div></div>
NO.	BY	DATE			
			<div><div><div>James H. Gagliardi</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div></div>		
			JUNE 15, 1998 ISSUE DATE		





1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE ACTUAL DIMENSIONS OF THE BERM SHALL VARY IN ACCORDANCE WITH THE VARIABLE DIMENSIONS SHOWN AND AS DIRECTED BY THE ENGINEER.
3. SEE PLANS FOR DETAILS OF SPECIFIED ROADSIDE BARRIER AND TERMINAL SECTIONS.
4. IF THE TAPER ON THE TOP OF THE TERMINAL SECTION IS STEEPER THAN 11:1, THE MINIMUM HEIGHT OF THE BERM SHALL BE 2'-0".

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

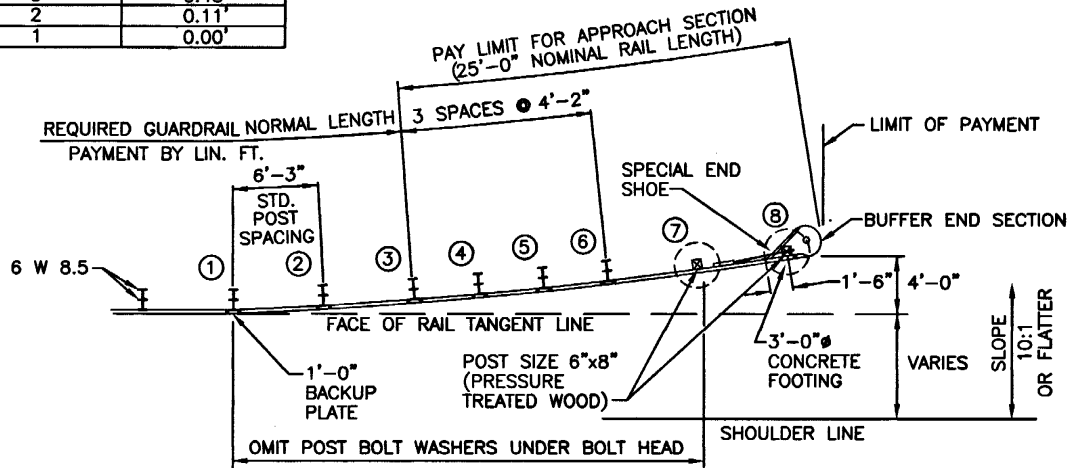
## EARTH BERM FOR ROADSIDE BARRIER TERMINAL SECTIONS

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

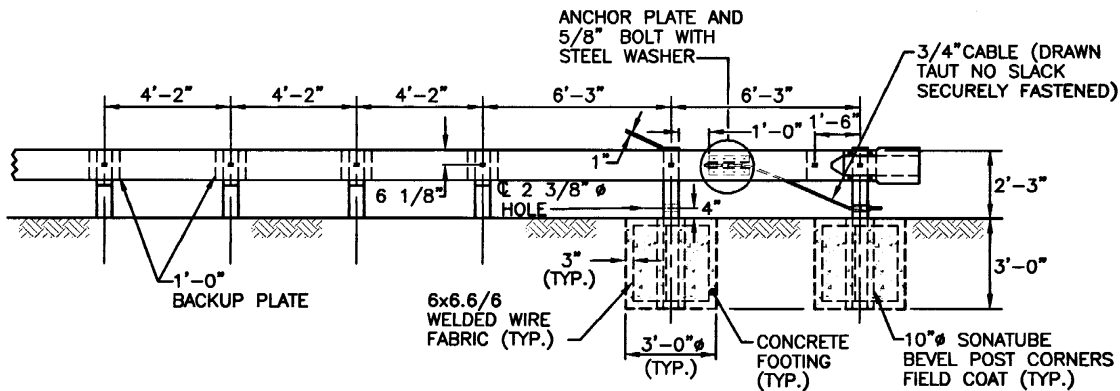
**JUNE 15, 1998**  
ISSUE DATE



OFFSET TO FACE OF POST FROM BACK OF RAIL ALIGNMENT	
POST NO.	OFFSET
8	4.00'
7	2.79'
6	1.79'
5	1.25'
4	0.80'
3	0.45'
2	0.11'
1	0.00'



**PLAN**



**ANCHORAGE DETAIL**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD IS NOT TO BE USED WHEN THE DESIGN SPEED IS EXCEEDS 45 MPH.
3. ALL METAL BEAM RAIL, POST, OFFSET BRACKETS, NUTS, BOLTS, WASHERS, AND ALL OTHER ACCESSORIES SHALL BE HOT DIPPED GALVANIZED.
4. ALL DIMENSIONS SUBJECT TO MANUFACTURERS' TOLERANCES.
5. AFTER GALVANIZING, THE NUT SHALL BE FREE RUNNING ON THE BOLT.
6. THE RAIL ELEMENT SHALL BE SHOP CURVED WHEN THE PLACEMENT OF GUARDRAIL IS ON A CURVE HAVING A RADIUS OF 150'-0" OR LESS. NO ADDITIONAL PAYMENT SHALL BE ALLOWED FOR THIS WORK.
7. POST AND OFFSET BRACKET TO BE FABRICATED FROM 6"x4" 8 1/2 LBS. STEEL "H" SECTIONS.
8. POST AND BRACKET BOLT HOLES TO BE OVAL UNLESS OTHERWISE SPECIFIED.
9. ALL HOLES SHALL BE 13/16".
10. FOR DETAILS ON CABLE, ANCHOR PLATE, END POST, BUFFER END SECTION, AND BACKUP PLATE SEE STD. 34.3.3.
11. TO FACILITATE REMOVAL OF BROKEN WOOD POST, 10" (ONLY) PERMANENT CARDBOARD SONATUBES OR METAL SLEEVES ARE TO BE INSTALLED AROUND THE POST PRIOR TO CASTING THE FOOTINGS. (SLEEVE TO BE FILLED WITH CONCRETE SAND.) CORNERS OF POST TO BE BEVELED TO FIT 10" SONATUBE. FIELD TREAT THE BEVELS WITH CHROMATED COPPER.
12. FOR TRAILING END OF GUARDRAIL ADJACENT TO ONE-WAY ROADWAY OMIT TERMINAL SECTION. NEXT TO LAST POST TO BE A LINE POST.
13. USE NO WASHERS UNDER POST BOLT HEADS FROM FIRST THRU SEVENTH POSTS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL END SECTION**

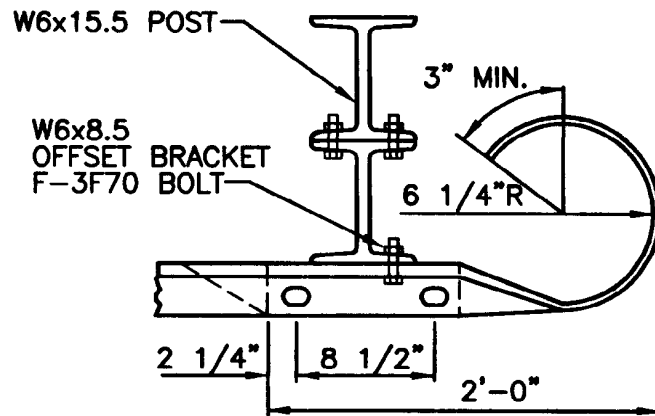
REVISIONS		
NO.	BY	DATE

*John A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

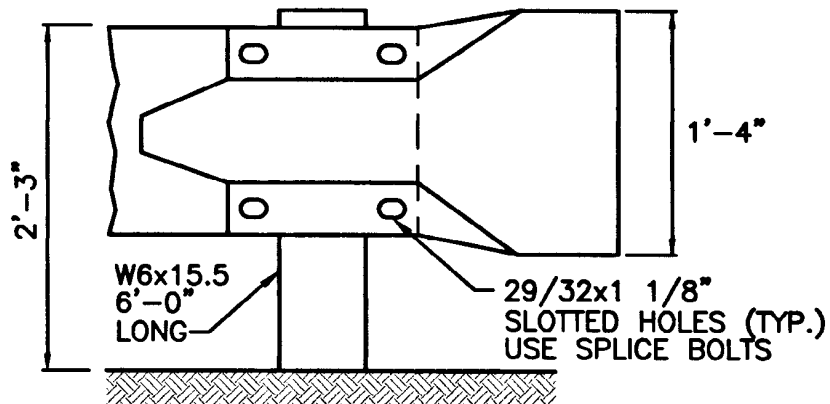
*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





PLAN

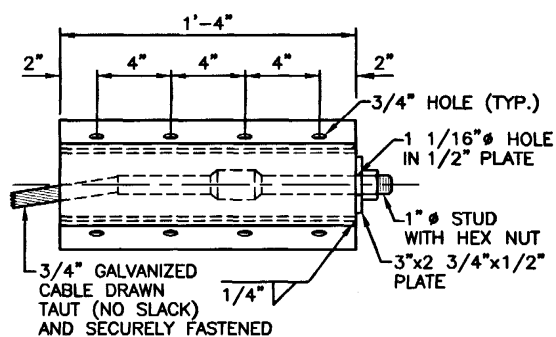
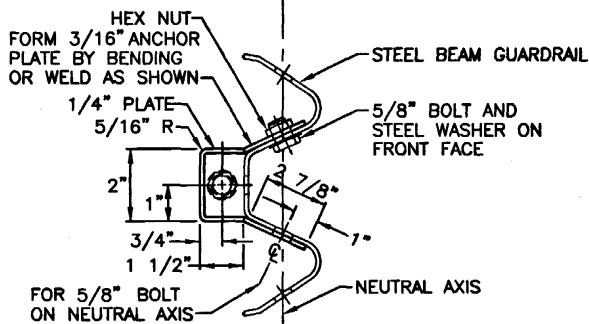


ELEVATION

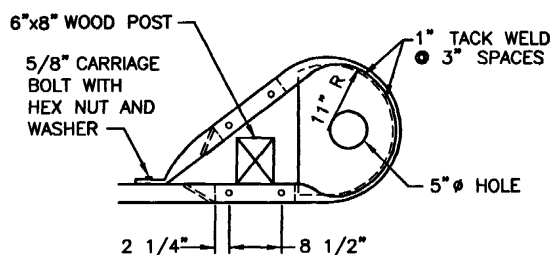
**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TERMINAL END SECTION (SINGLE FACE)	<div><div>R.I. STANDARD 34.3.2</div></div>
NO.	BY	DATE		
			<div><div><div>James H. Capaldi</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund J. Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div><div><div>JUNE 15, 1998</div><div>ISSUE DATE</div></div></div>	

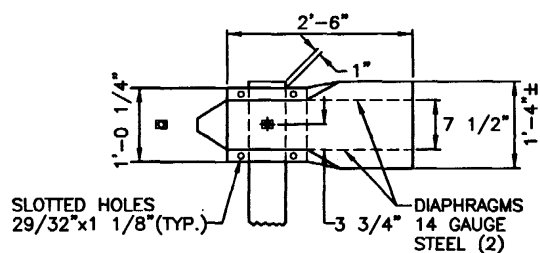
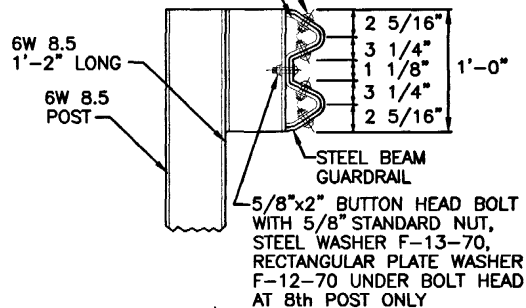


### ANCHOR PLATE DETAILS

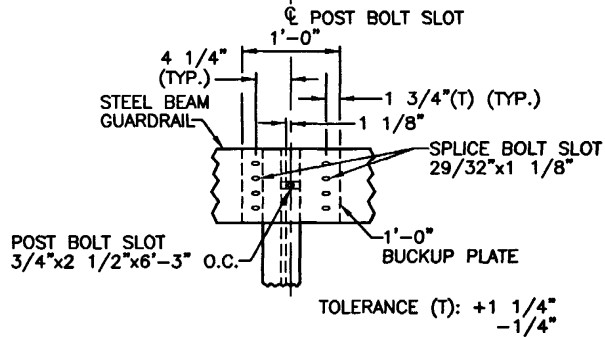


5/8"x1 1/4" BUTTON HEAD BOLT  
WITH 5/8" STANDARD NUT AND  
STEEL WASHER F-13-70  
(8 REQUIRED AT EACH SPLICE)

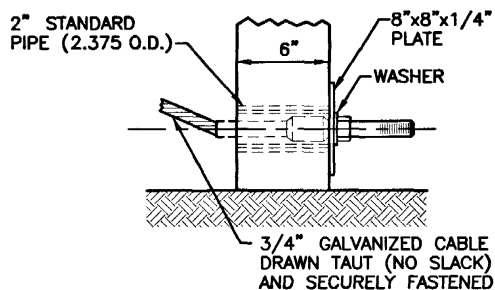
1'-0" BACKUP PLATE



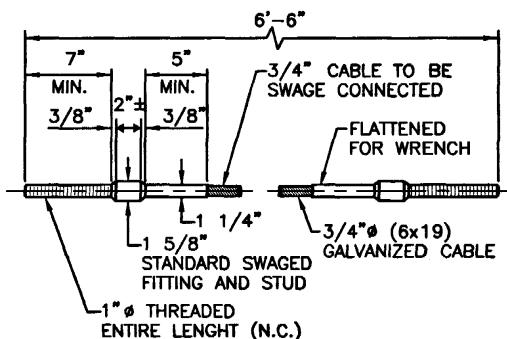
### BUFFER END DETAILS



### BACKUP PLATE DETAILS



### ANCHORAGE DETAIL AT POST



### CABLE ASSEMBLY

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

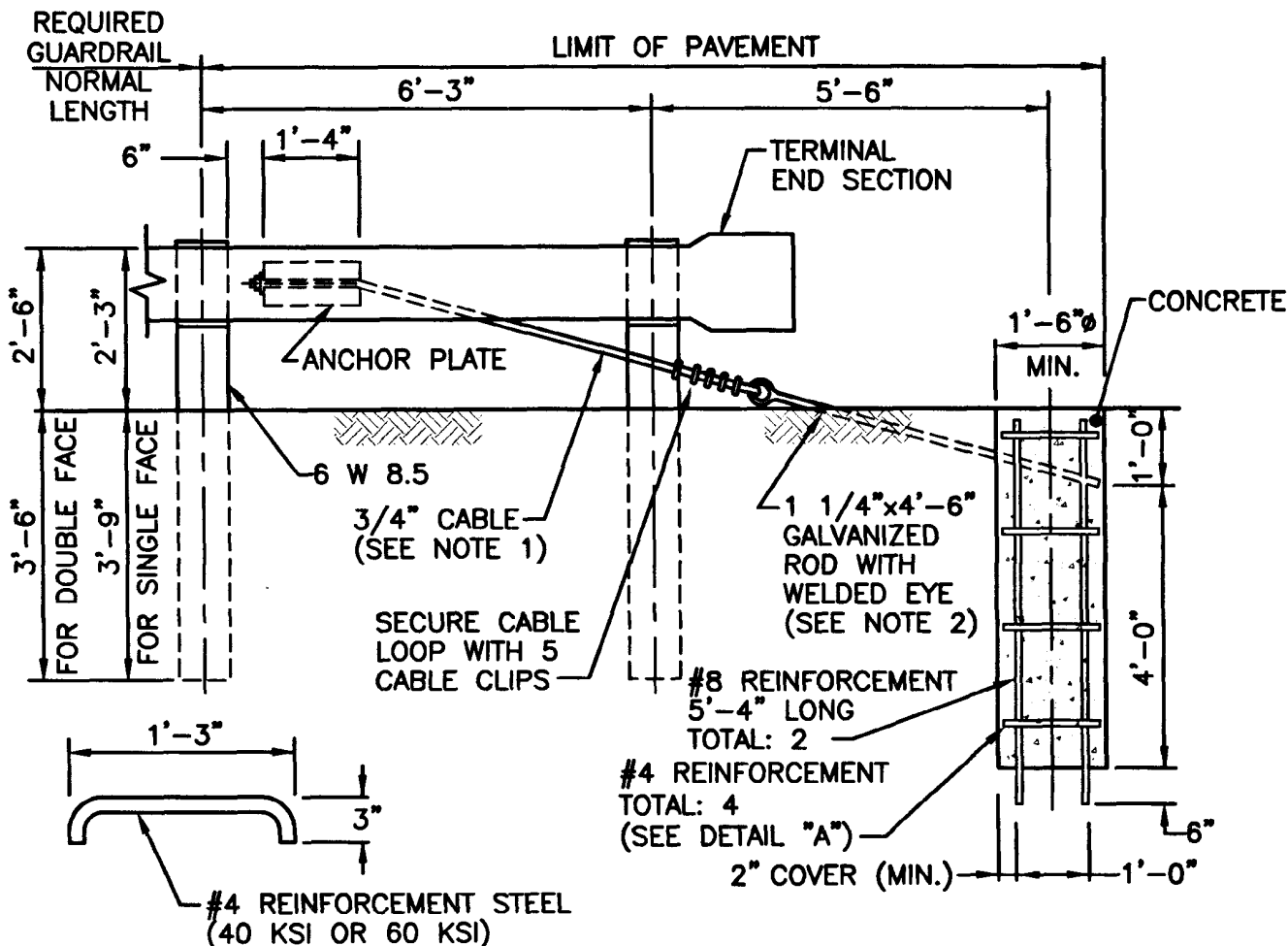
*John A. Capelli*  
CHIEF ENGINEER  
TRANSPORTATION

### ANCHORAGE DETAILS APPROACH END SECTION

*Edward J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
34.3.3



**DETAIL "A"**

1 1/2" EYES  
ORIENT TO ACCOMMODATE  
TURNBUCKLE CONNECTIONS  
FOR CABLE BARRIER

1 1/4"x4'-6"  
GALVANIZED RODS  
PARALLEL TO AXIS  
OF GUARDRAIL AT  
POINT OF ANCHORAGE

#8 REINFORCEMENT

1 1/4"x4'-6"  
GALVANIZED ROD

1 1/2"  
EYE

1'-6" MIN.  
CONCRETE ANCHOR

6"  
MIN.

6"  
MAX.

#8 REINFORCEMENT

5 1/2"

**DOUBLE GUARDRAIL  
ANCHOR**

**SINGLE GUARDRAIL  
ANCHOR**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. CABLE TO BE PARALLEL TO GUARDRAIL FOR STRAIGHT RUNS OF RAIL. CABLE MAY HAVE ANGLE POINT AT ANCHOR PLATE IF GUARDRAIL IS CURVED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

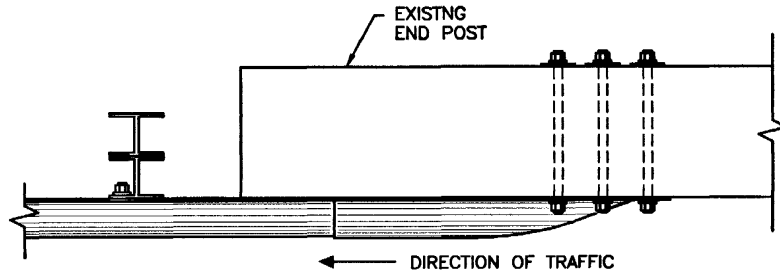
**ANCHORAGE DETAILS  
TRAILING END SECTION**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

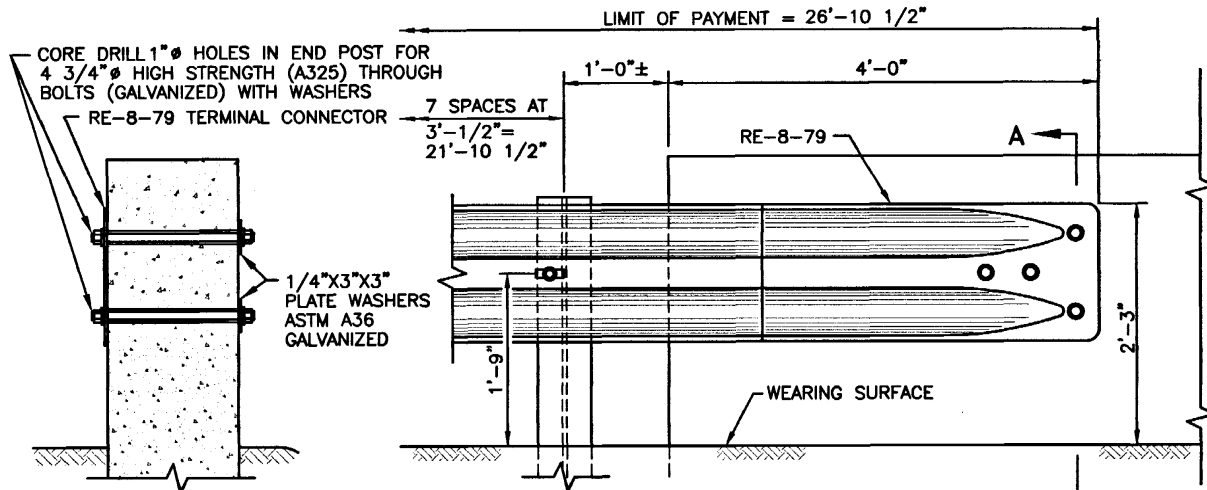
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

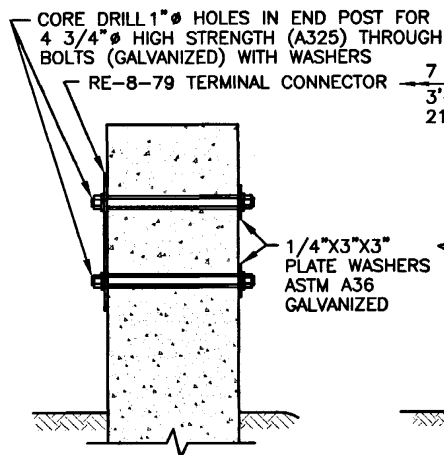




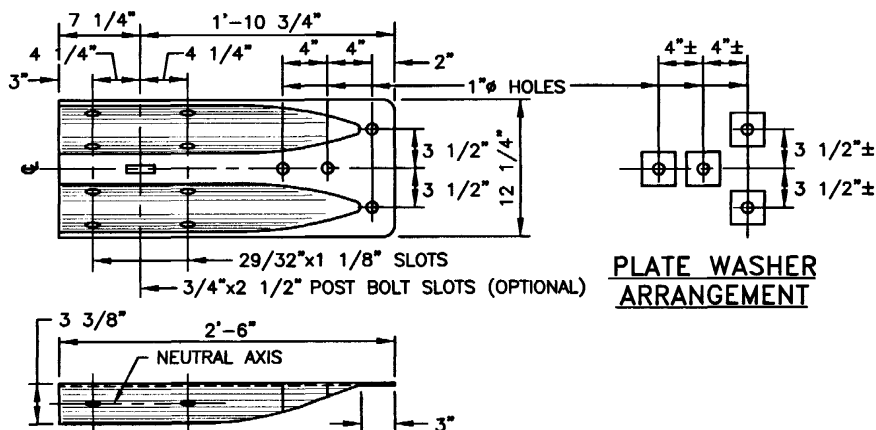
**PLAN**



**ELEVATION**



**SECTION A-A**



**PLATE WASHER  
ARRANGEMENT**

**TERMINAL CONNECTOR  
(RE-8-79)**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL CONNECTION TO EXISTING END POST  
APPROACH END SECTION**

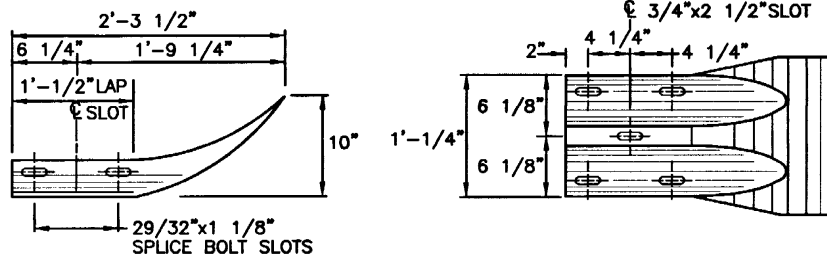
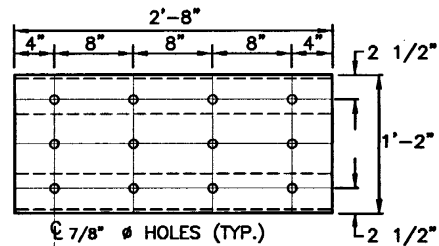
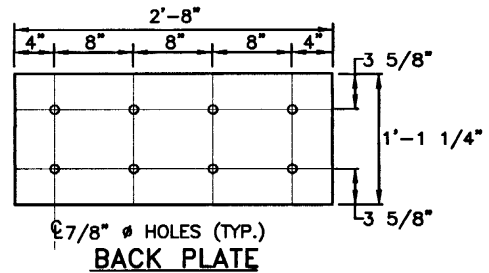
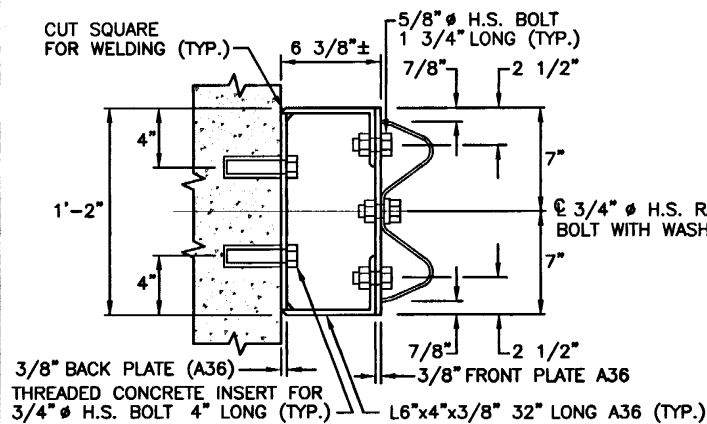
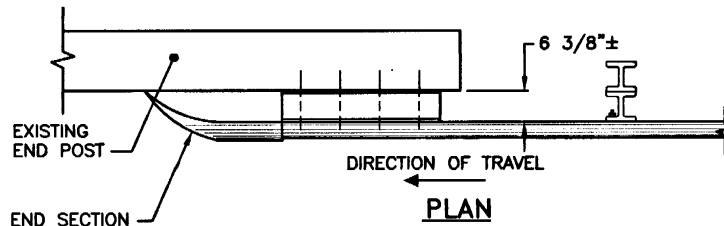
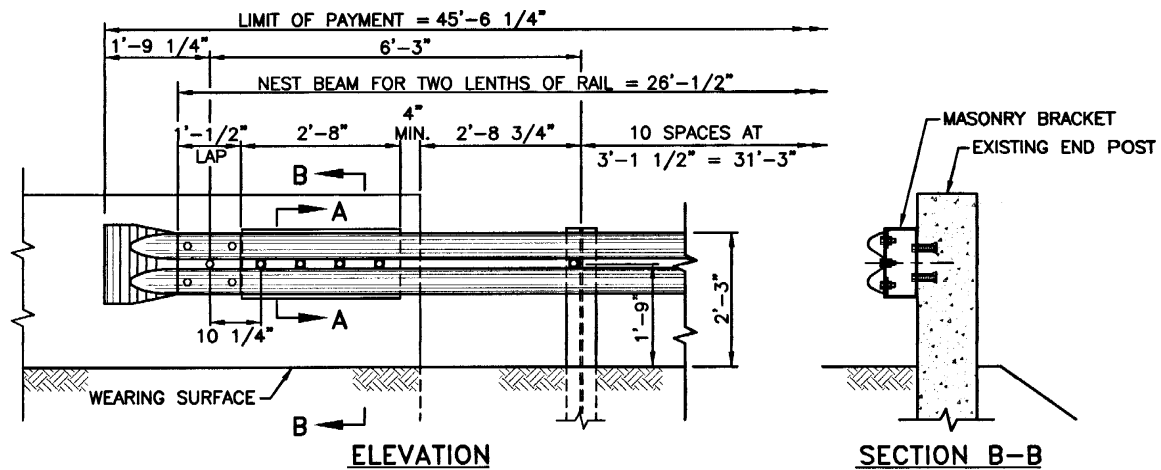
REVISIONS		
NO.	BY	DATE

*John K. Gable*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. MASONRY BRACKET, END SECTION, GUARDRAIL, POSTS ALL HARDWARE, NUTS, BOLTS, WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. ALL STRUCTURAL SHAPES WHICH MAKE UP THE MASONRY BRACKET SHALL BE GALVANIZED.
4. FOR HIGH SPEED, UPGRADE TO THIER BEAM ESPECIALLY AT FIXED OBJECT LOCATIONS.
5. DIMENTIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARENCE, AND ACCEPTED MANUFACTURING PRACTICES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### GUARDRAIL CONNECTION TO EXISTING END POST TRAILING END SECTION

REVISIONS  
NO. BY DATE

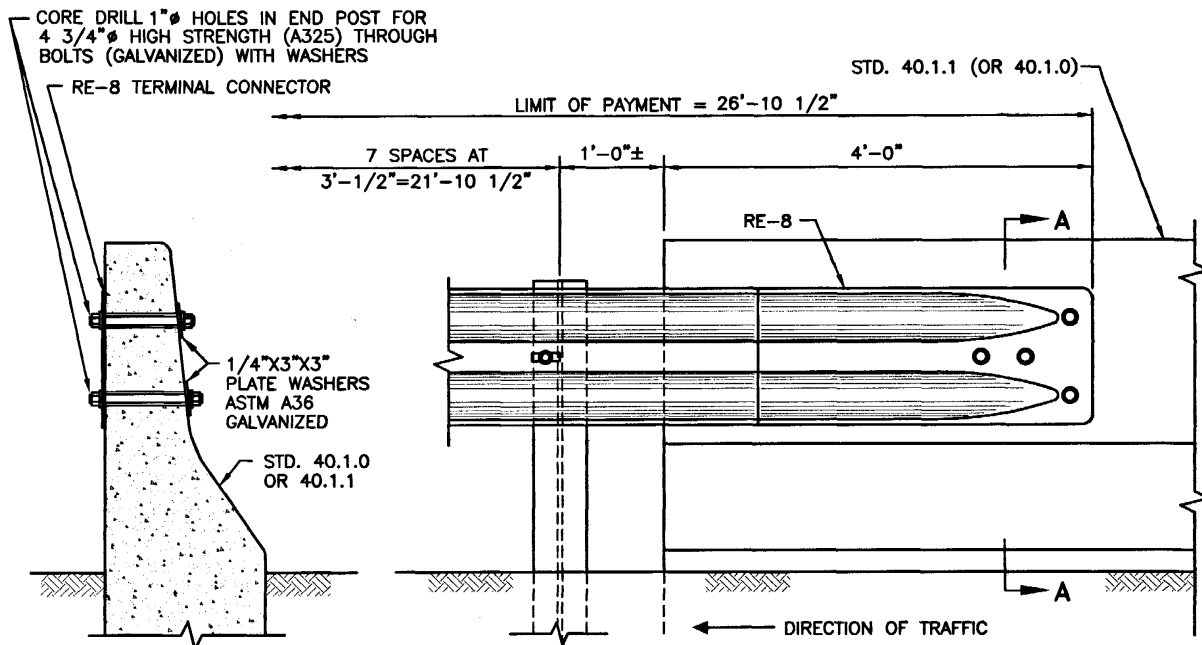
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

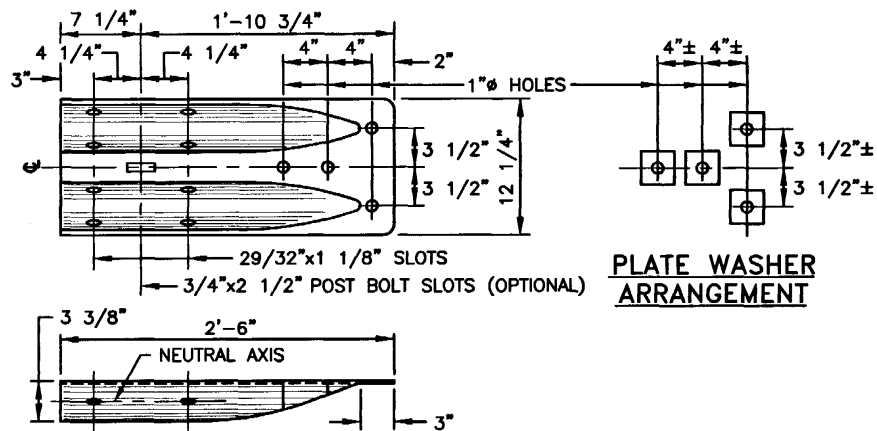
JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
34.3.6



SECTION A-A

ELEVATION



TERMINAL CONNECTOR  
(RE-8)

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
2. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, HUTS, BOLTS, WASHERS, DRILLING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.
3. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE, AND ACCEPTED MANUFACTURING PRACTICES.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

GUARDRAIL CONNECTION TO BARRIER  
APPROACH END SECTION

REVISIONS		
NO.	BY	DATE

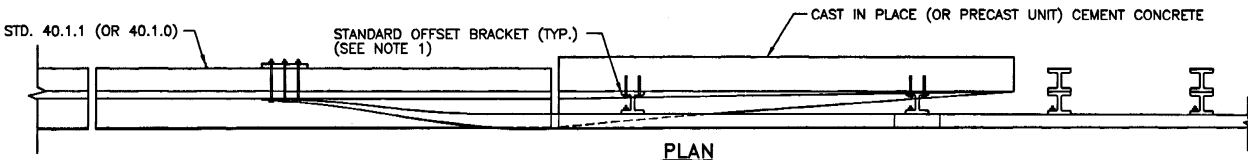
*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

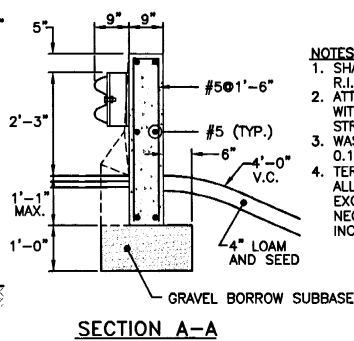
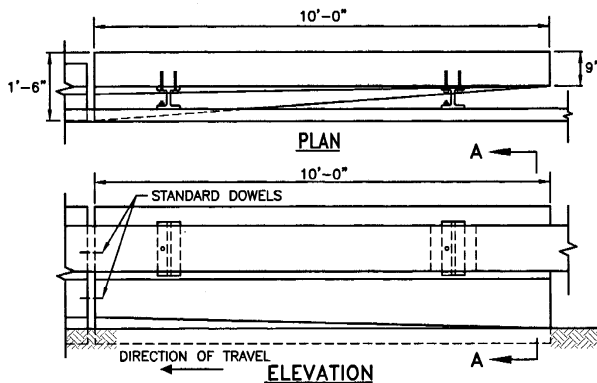
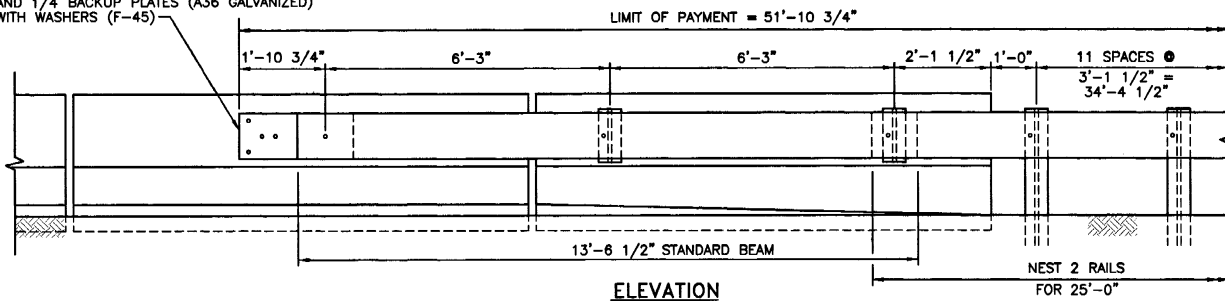
JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
34.3.7





"W" BEAM TERMINAL CONNECTOR RE-8 WITH  
(4) 1/4" Ø HIGH STRENGTH BOLTS (A325 GALVANIZED)  
AND 1/4" BACKUP PLATES (A36 GALVANIZED)  
WITH WASHERS (F-45)



- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 901 OF THE R.I. STANDARD SPECIFICATIONS.
  2. ATTACH EACH STANDARD OFFSET BRACKET TO BARRIER WITH 2 HIGH STRENGTH 3/4" Ø BOLTS AND THREADED STRUCTURAL CONCRETE INSERTS (A325 GALVANIZED).
  3. WASHERS (F-45) SHALL BE 1" I.D., 2" O.D. AND 0.134" THICK.
  4. TERMINAL CONNECTOR, GUARDRAIL, POSTS, BRACKETS, ALL HARDWARE, NUTS, BOLTS, WASHERS DRILLING, EXCAVATION, CONCRETE AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION ARE INCLUDED AS PART OF THIS STANDARD.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
GUARDRAIL CONNECTION TO BARRIER  
TRAILING END SECTION

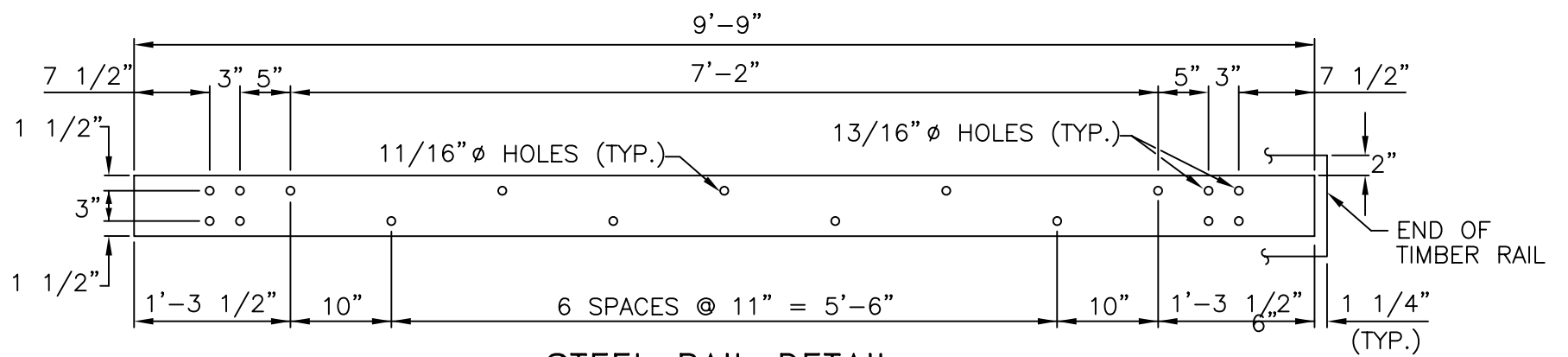
R.I.  
STANDARD  
34.3.8

JUNE 15, 1998  
ISSUE DATE

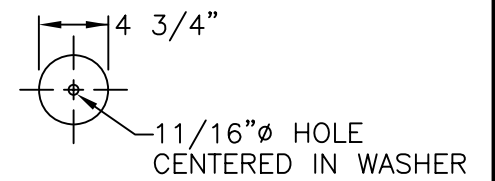
APPROVED  
TRANSPORTATION

APPROVED  
TRANSPORTATION

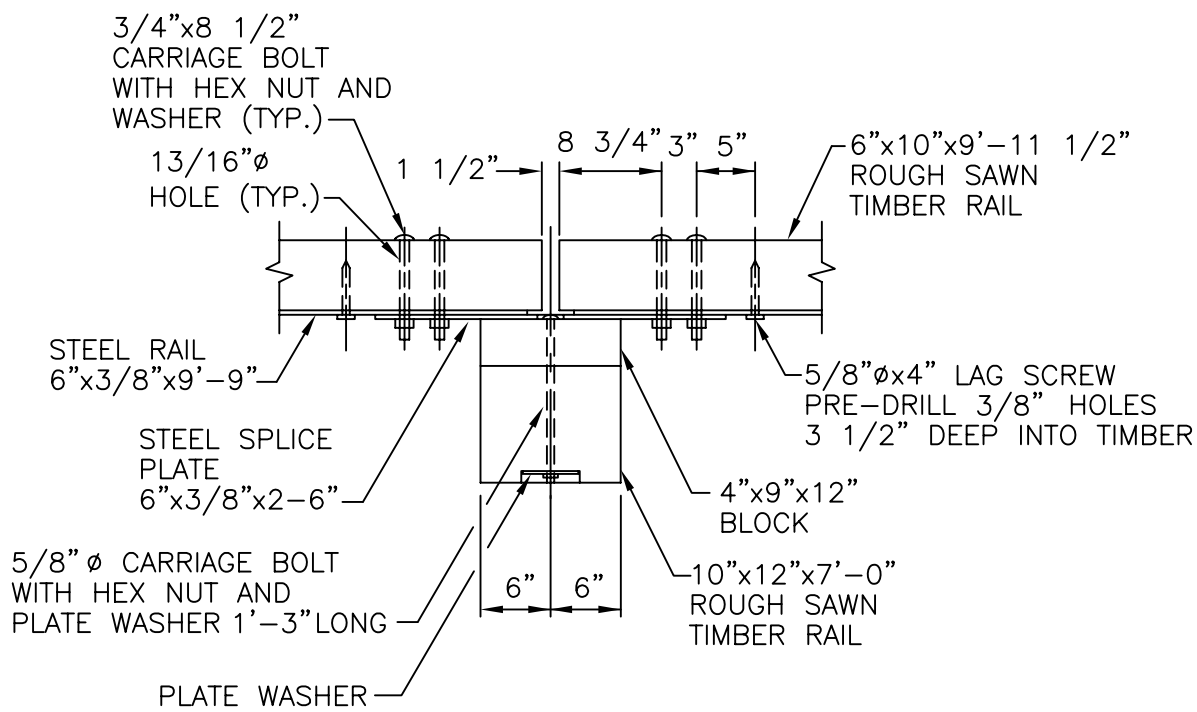
NO.	BY	DATE



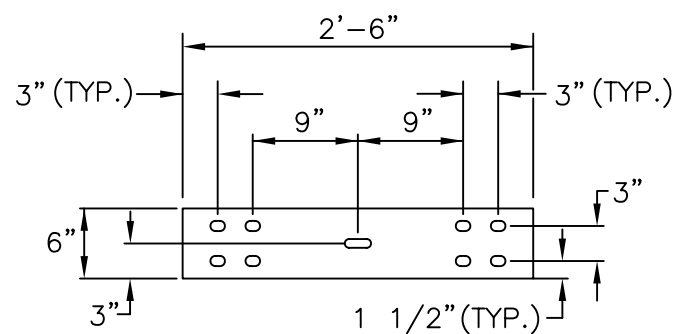
**STEEL RAIL DETAIL**  
**6"x3/8"x9'-9"**



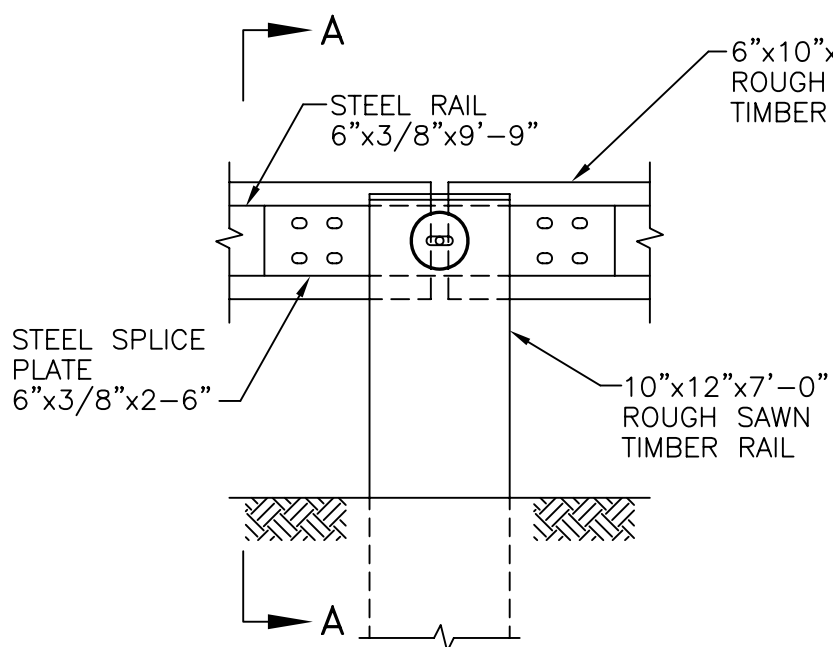
**PLATE WASHER DETAIL**  
**4 3/4"Øx1/4"**



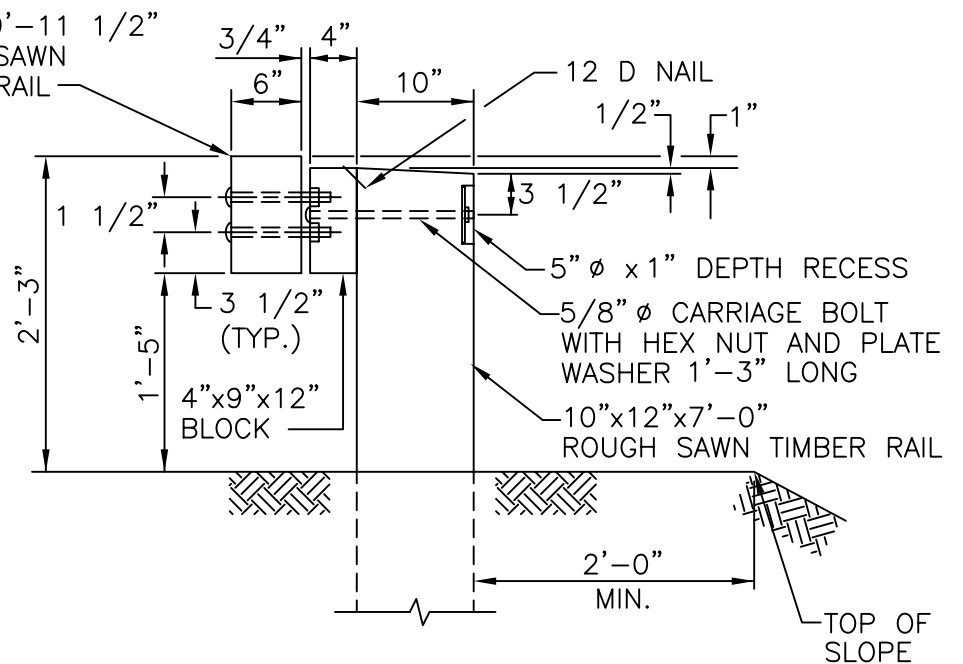
**POST CONNECTION PLAN**



**STEEL SPLICE PLATE DETAIL**  
**6"x3/8"x2'-6"**



**POST CONNECTION ELEVATION**



**SECTION A-A**

**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
2. ALL STRUCTURAL STEEL AND FASTENER HARDWARE SHALL BE WEATHERING STEEL AS SPECIFIED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**STEEL BACKED TIMBER GUARDRAIL**

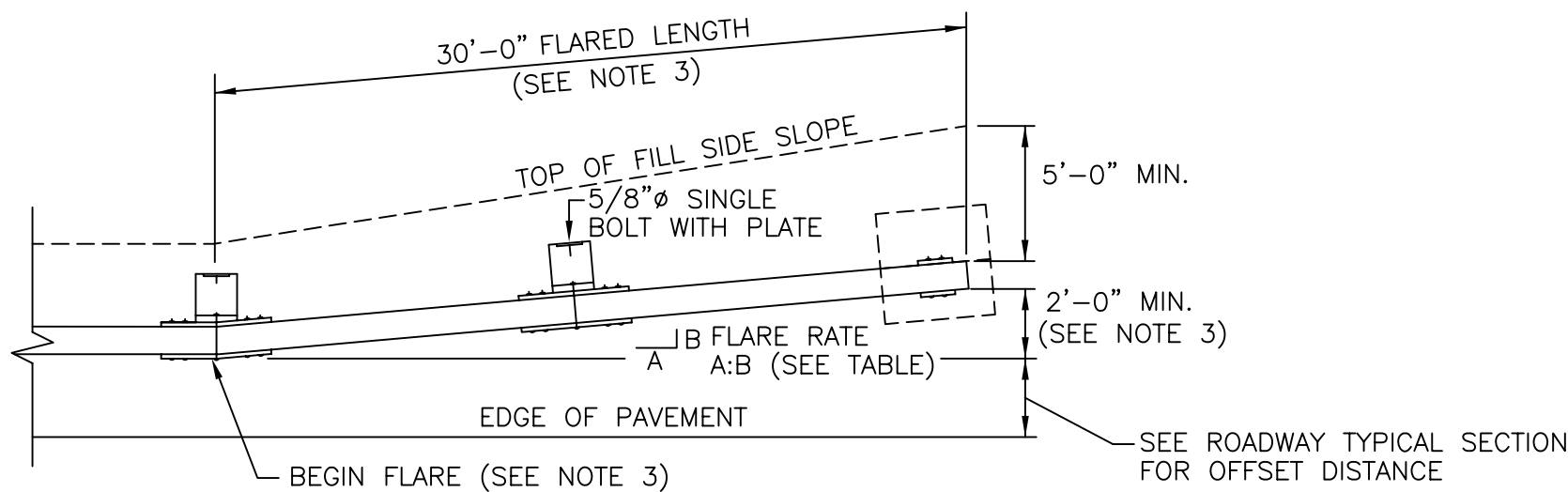
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

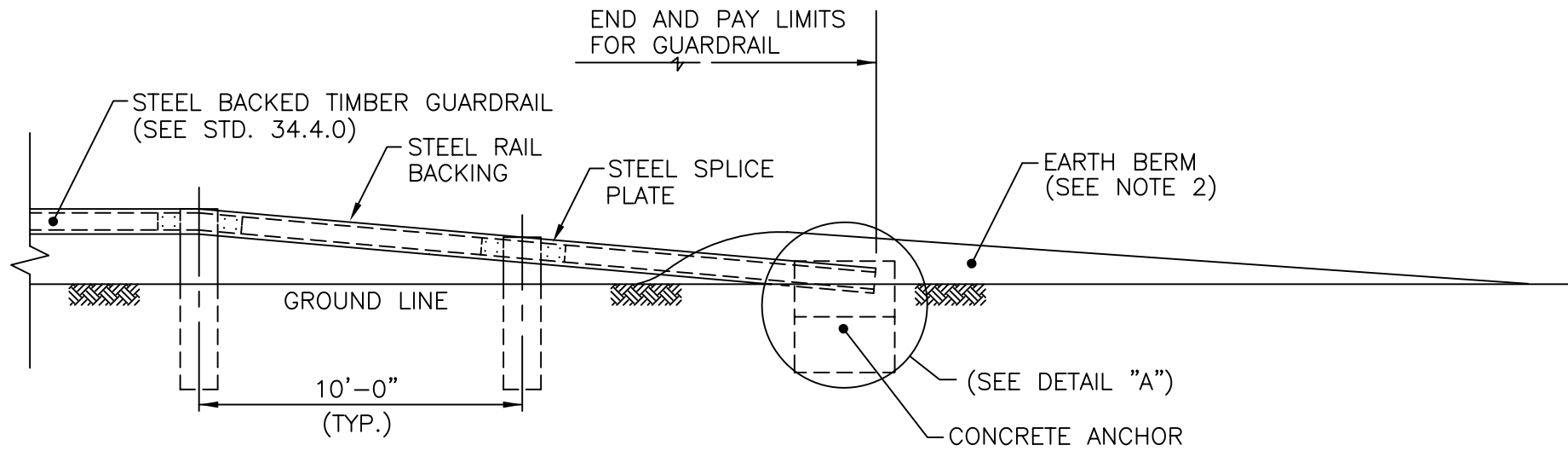
R.I.  
STANDARD  
34.4.0



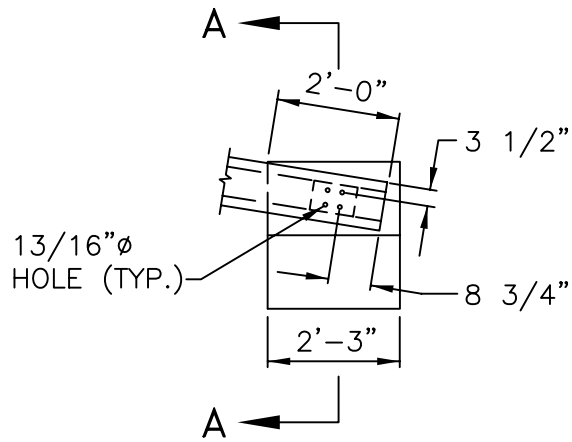
PLAN

DESIGN SPEED (MPH)	FLARE RATE A:B
60	13:1
50	11:1
40	9:1
30 OR LESS	7:1

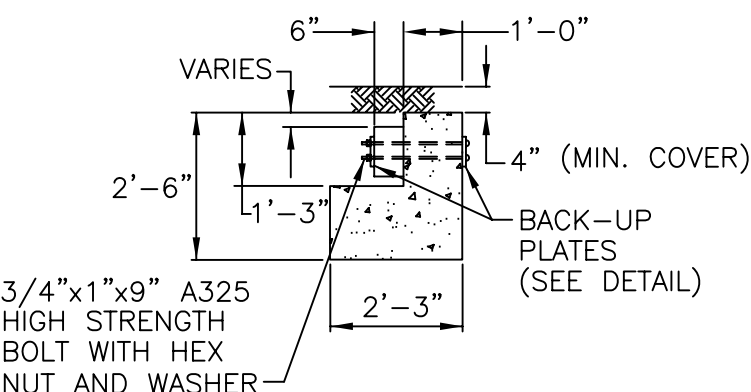
GUARDRAIL FLARE RATES



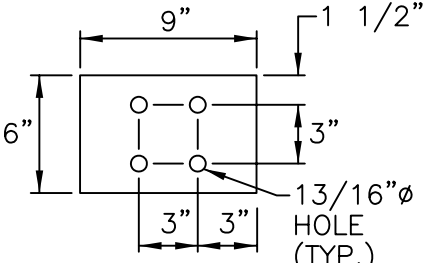
ELEVATION



DETAIL "A"



SECTION A-A



BACK-UP PLATE DETAIL  
6"x1 1/2"x9"

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
  2. REFERENCE STD. 34.3.0 FOR CONSTRUCTION OF EARTH BERM.
  3. THE GUARDRAIL FLARE SHOWN IN THE PLAN VIEW IS THE MINIMUM LENGTH AND RATE REQUIRED. AS DIRECTED BY THE ENGINEER, THE GUARDRAIL SHOULD BE FLARED SO THE TERMINAL SECTION IS OUTSIDE THE CLEAR ZONE. WHEN THIS IS NOT PRACTICAL, IT SHOULD BE FLARED AS FAR FROM THE ROAD AS PRACTICAL AT THE MAXIMUM RATE INDICATED ON THE GUARDRAIL FLARE RATE TABLE.
  4. REFERENCE STD. 34.4.0 FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.
  5. THE BLOCKS SHALL BE INCLUDED IN THE TERMINAL SECTION, EXCEPT ON THE CONCRETE ANCHOR.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BACKED TIMBER GUARDRAIL  
TERMINAL SECTION – TYPE 1

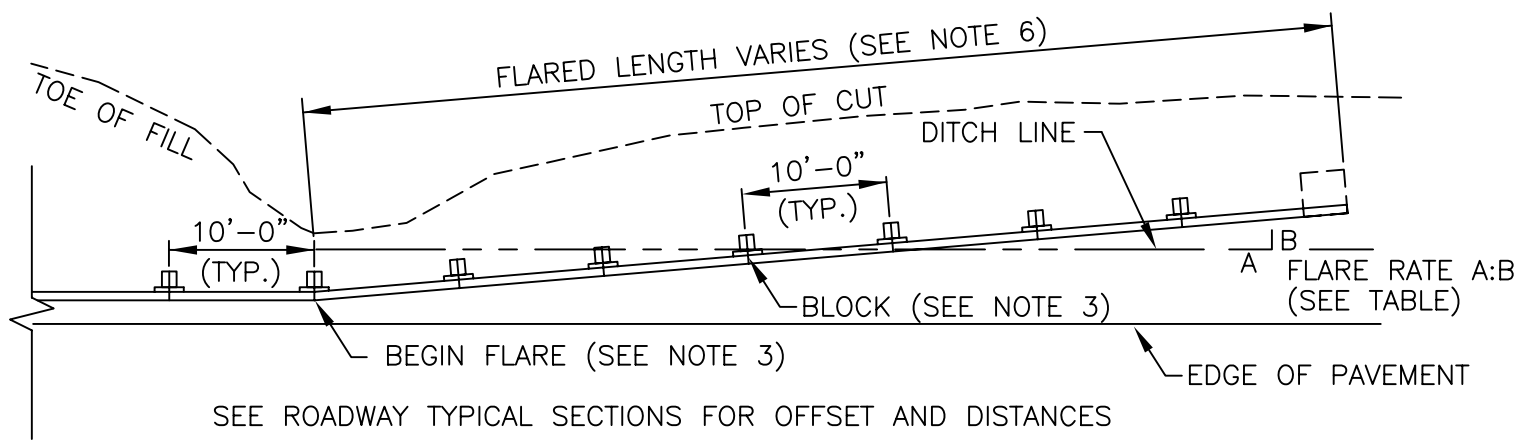
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund D. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

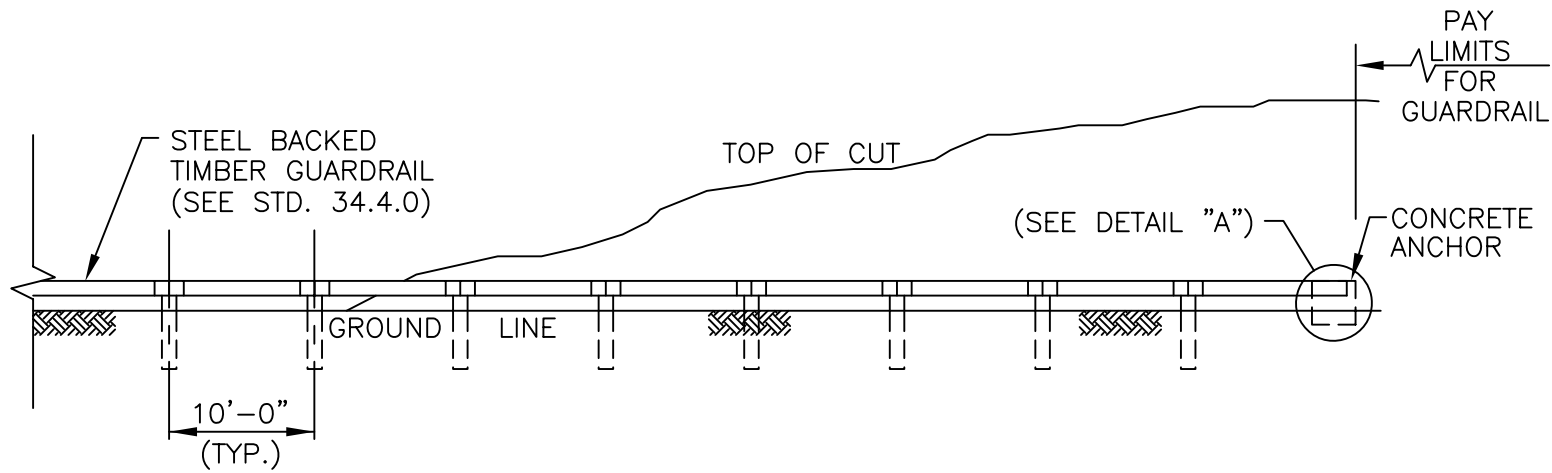




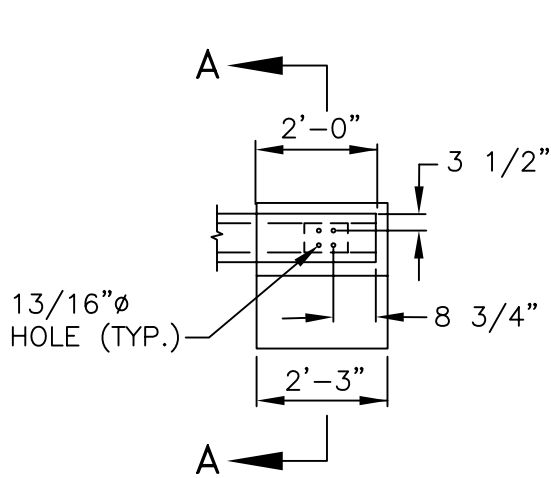
PLAN

DESIGN SPEED (MPH)	FLARE RATE A:B
40	9:1
30OR LESS	7:1

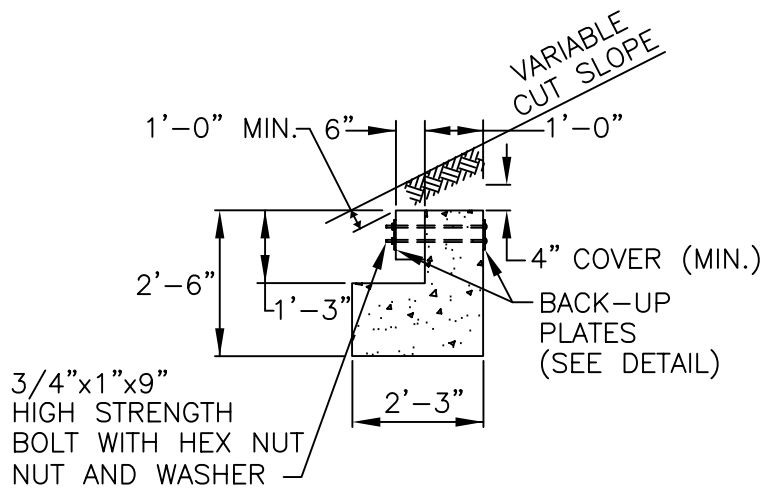
GUARDRAIL FLARE RATES



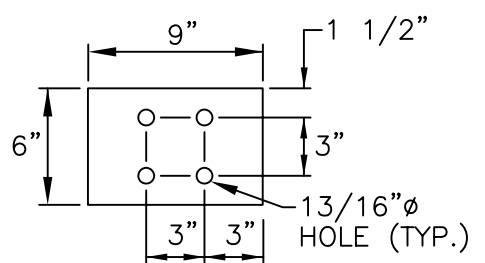
ELEVATION



DETAIL "A"



SECTION A-A



BACK-UP PLATE  
DETAIL  
6"x1/2"x9"

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 902 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS STANDARD IS NOT TO BE USED WHEN THE DESIGN SPEED EXCEEDS 45 MPH.
3. SEE STD. 34.4.0 STEEL BACKED TIMBER GUARDRAIL, FOR TIMBER, STRUCTURAL STEEL AND HARDWARE DETAILS.
4. THE BLOCKS SHALL BE INCLUDED IN THE TERMINAL SECTION, EXCEPT ON THE CONCRETE ANCHOR.
5. CUT FLARES SHALL BEGIN AT THE NEAREST POST TO A TRANSITION POINT BETWEEN FILL AND CUT AS DIRECTED BY THE ENGINEER.
6. THE FLARE SHALL BE EXTENDED INTO THE CUT UNTIL A MINIMUM OF 1'-0" COVER IS OBTAINED OVER THE GUARDRAIL END.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

STEEL BACKED TIMBER GUARDRAIL  
TERMINAL SECTION – TYPE 2

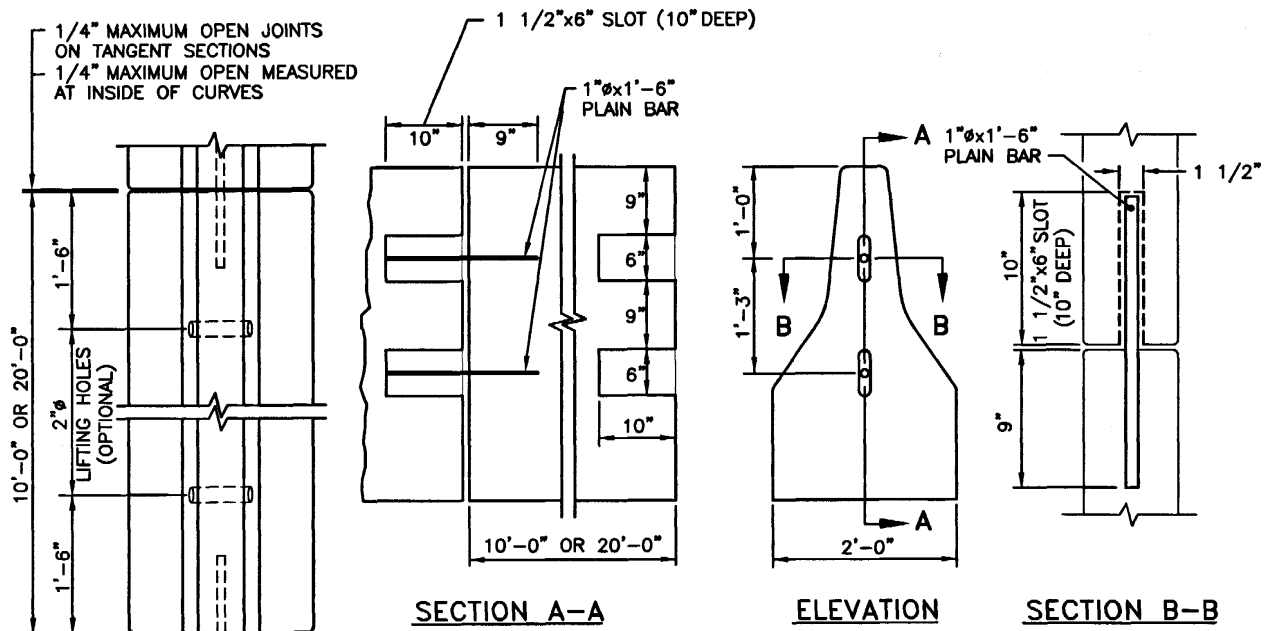
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

*James H. Casabelli*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

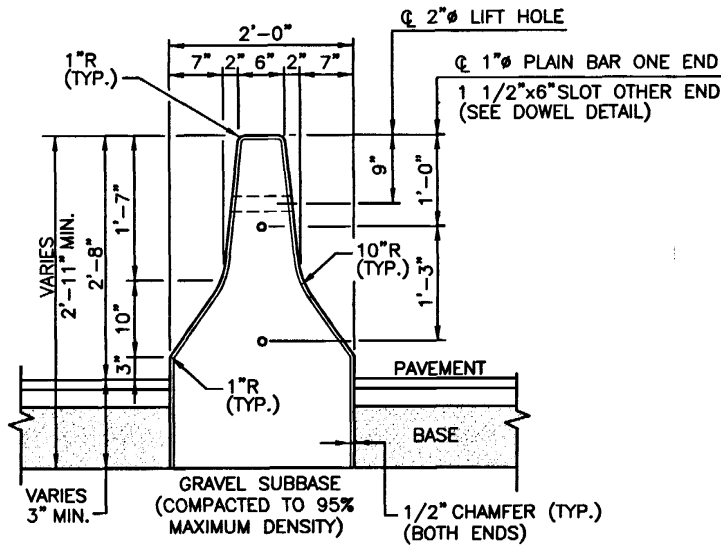
JUNE 15, 1998  
ISSUE DATE



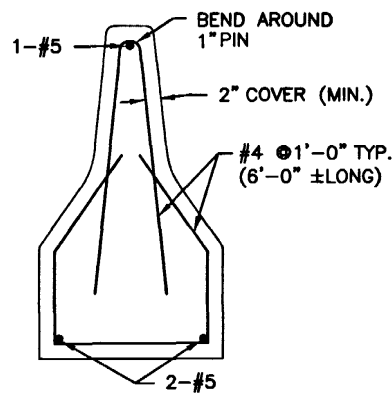


PLAN

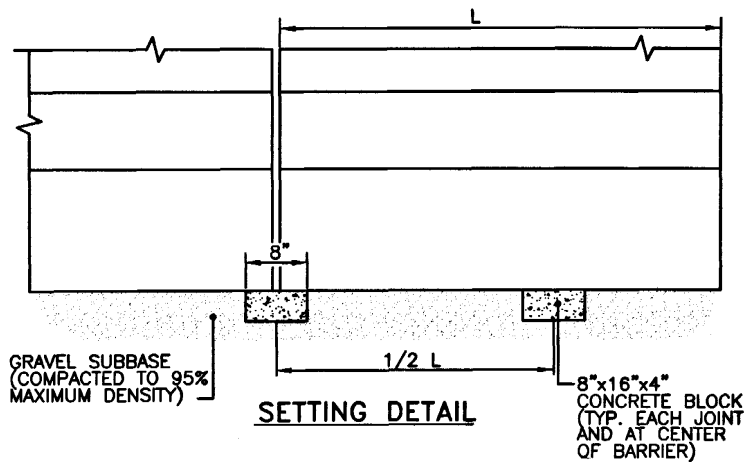
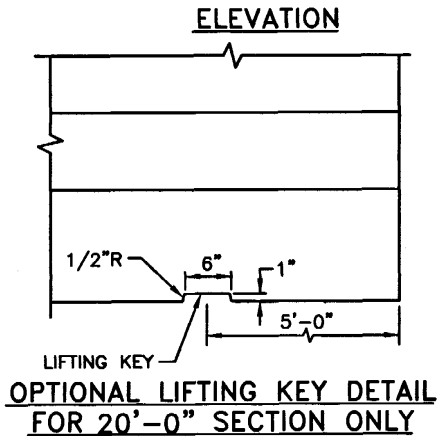
DOWEL DETAIL AT ENDS



ELEVATION



REINFORCING



NOTE: SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

DOUBLE-FACED PRECAST MEDIAN BARRIER

REVISIONS		
NO.	BY	DATE

*John A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Parkin*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



**SECTION A-A**

### ELEVATION

**SECTION B-B**

DETAIL "A"

## REINFORCING

## ELEVATION

## PLAN

NOTES:

- NOTES:**  
1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.  
2. UNIT SHALL BE SUPPORTED BY CONCRETE SETTING BLOCKS (SEE STD. 40.1.0).

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

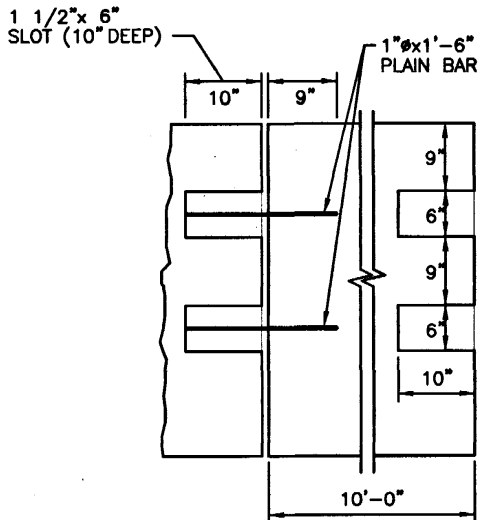
### SINGLE-FACED PRECAST MEDIAN BARRIER

*James H. Gumbli*  
CHIEF ENGINEER  
TRANSPORTATION

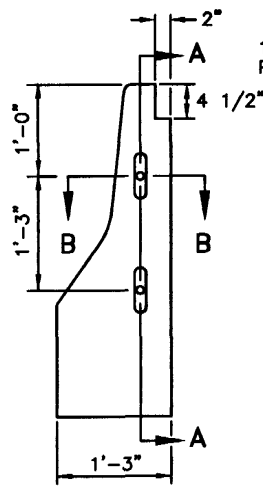
*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE

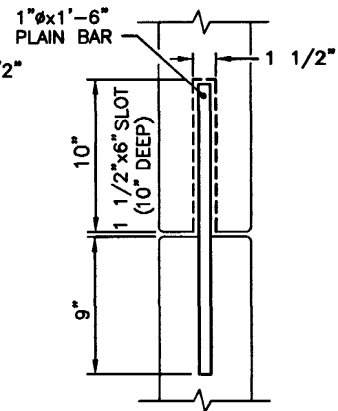
**R.I.  
STANDARD  
40.2.0**



SECTION A-A

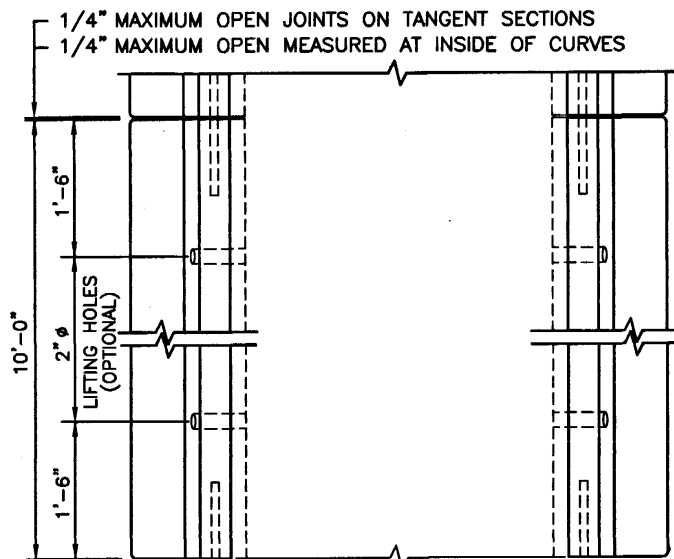


ELEVATION

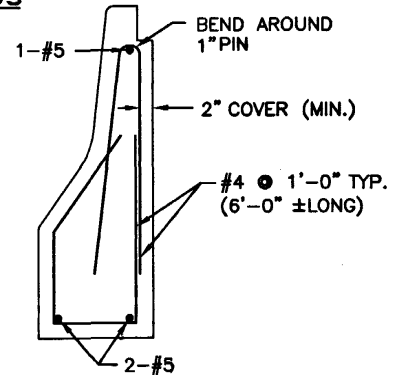


SECTION B-B

DOWEL DETAIL AT ENDS



PLAN

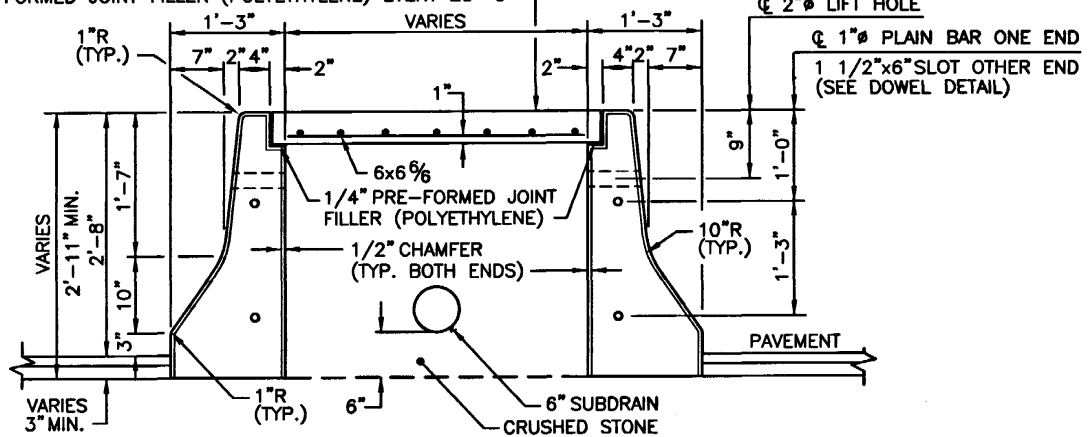


REINFORCING

NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.
2. UNIT SHALL BE SUPPORTED BY CONCRETE SETTING BLOCKS (SEE STD. 40.1.0).
3. SUBDRAIN SHALL BE TIED INTO THE DRAINAGE SYSTEM.

4" CAST IN PLACE CEMENT CONCRETE WITH EXPANSION JOINTS AND 1/4" PRE-FORMED JOINT FILLER (POLYETHYLENE) EVERY 25'-0"



ELEVATION

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

SINGLE-FACED PRECAST MEDIAN BARRIER

REVISIONS		
NO.	BY	DATE

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

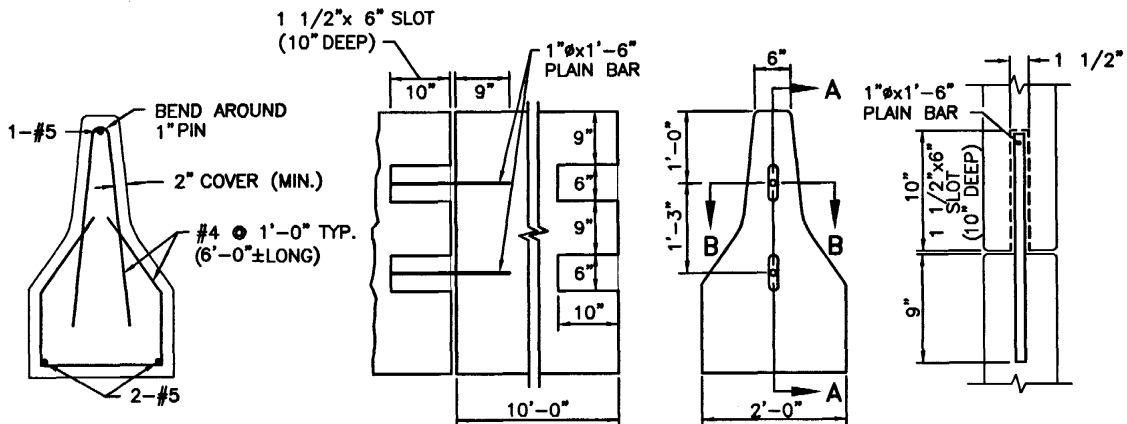
*Edward J. Perkins*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
40.2.1







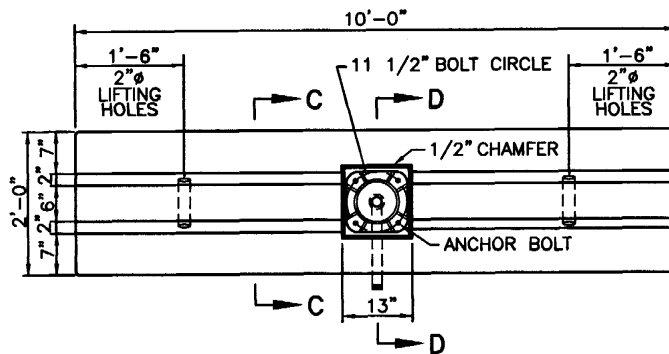
**REINFORCING**

**SECTION A-A**

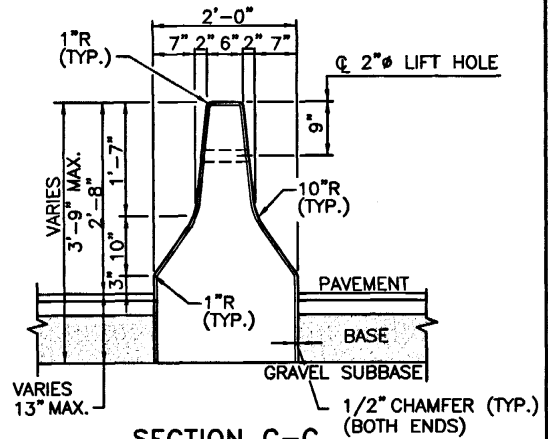
**ELEVATION**

**SECTION B-B**

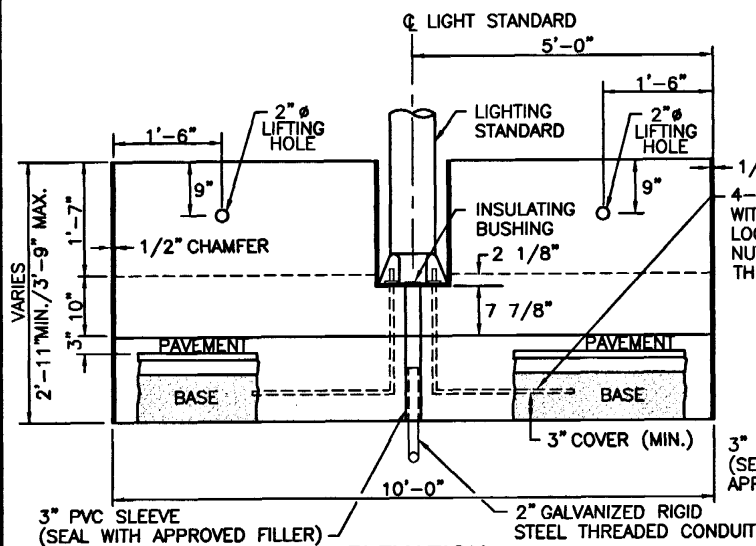
**DOWEL DETAIL AT ENDS**



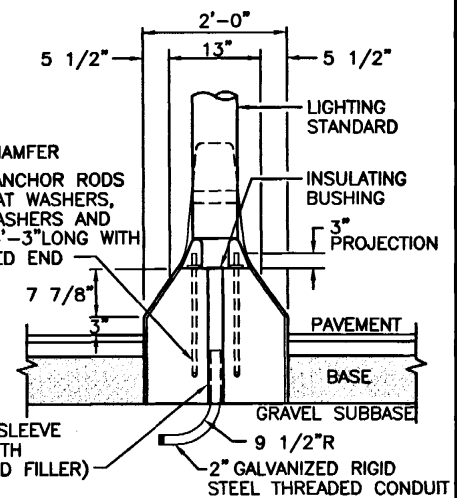
**PLAN**



**SECTION C-C**



**ELEVATION**



**SECTION D-D**

**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION 909 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

**PRECAST MEDIAN BARRIER FOR LIGHT STANDARD**

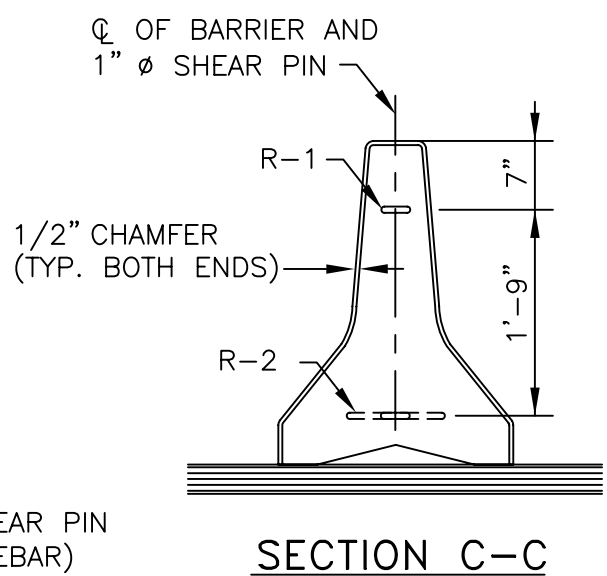
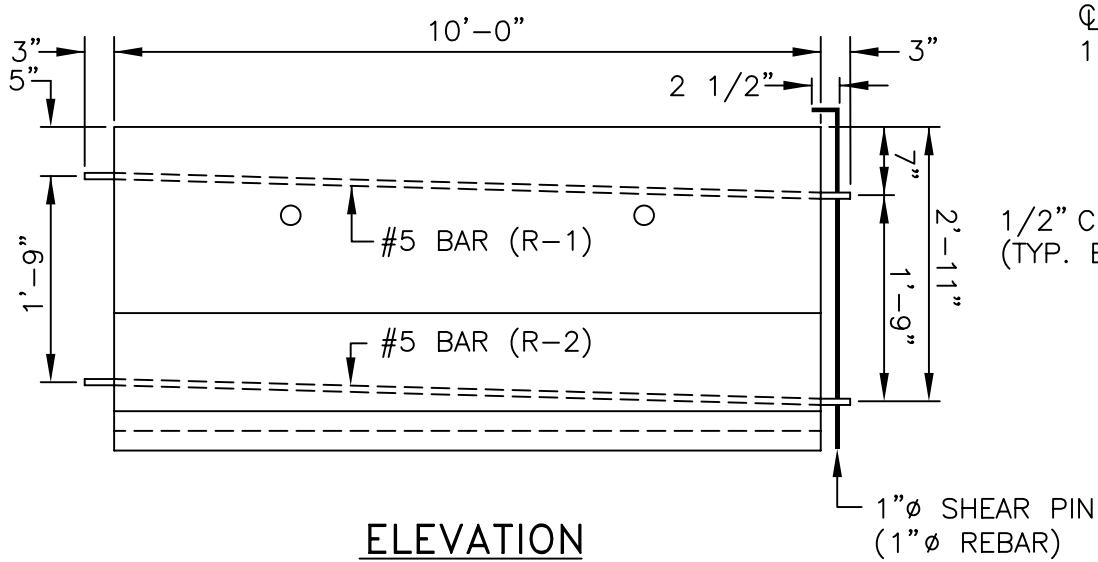
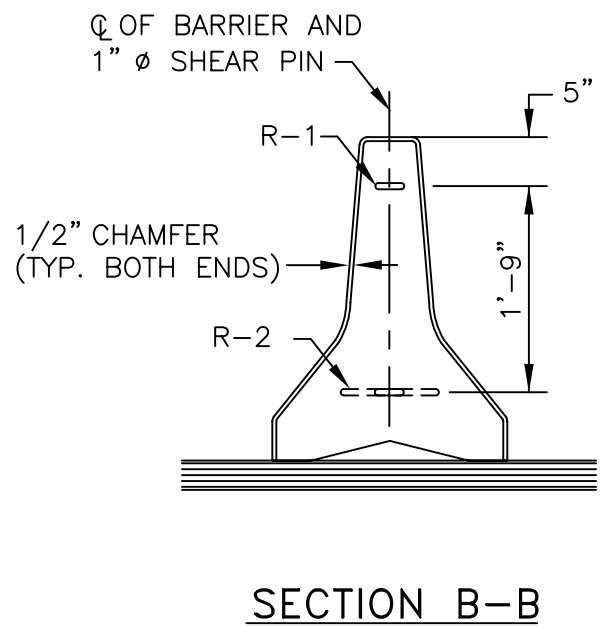
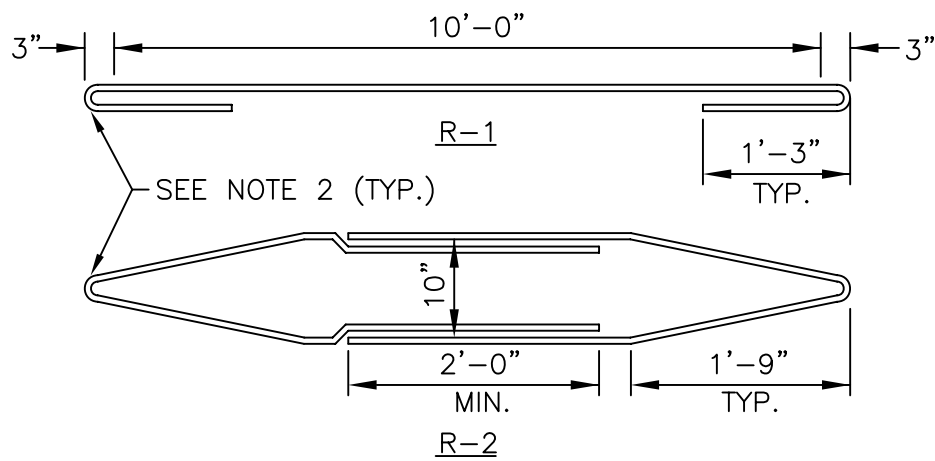
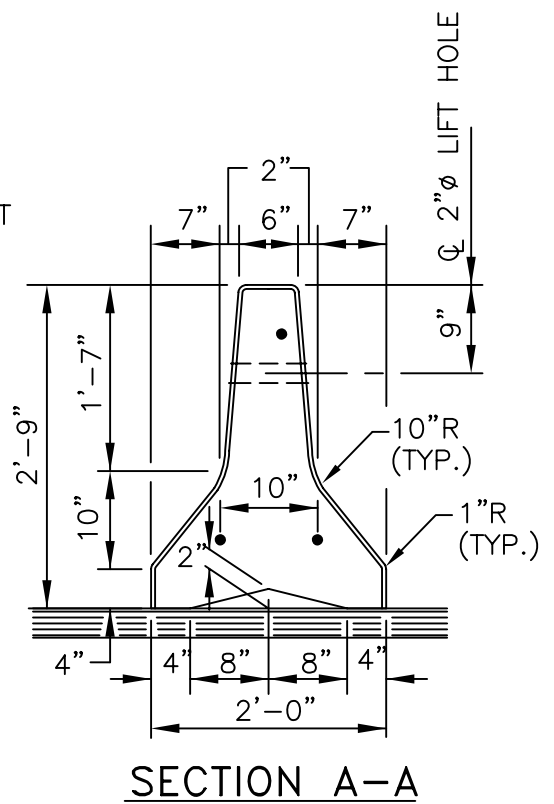
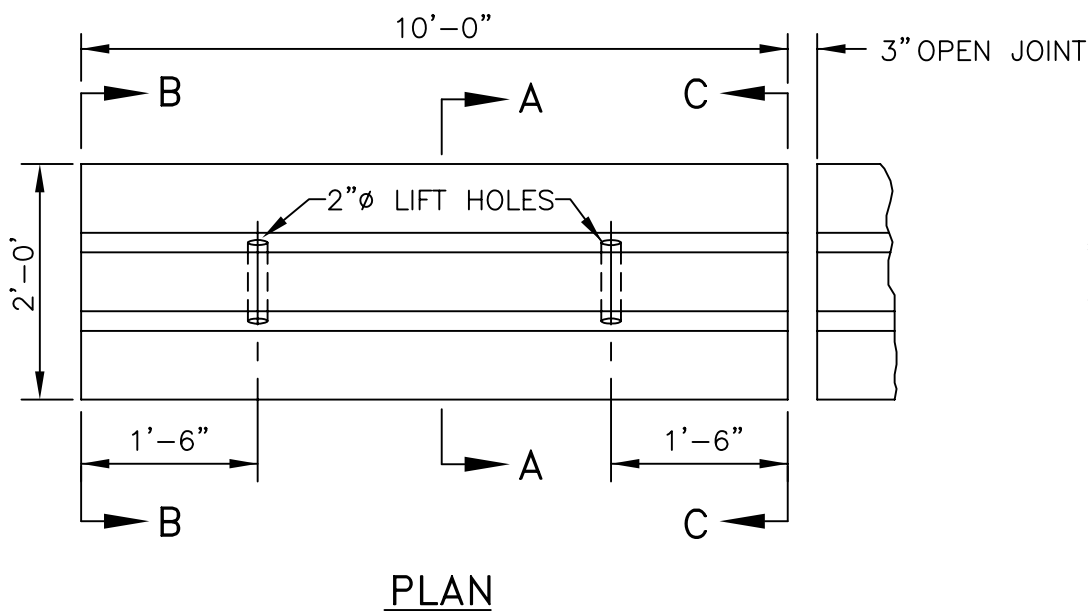
REVISIONS		
NO.	BY	DATE

*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Rourke*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
**40.4.0**



NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 926 OF THE R.I. STANDARD SPECIFICATIONS.
2. BEND REBARS AROUND A 1 3/8"  $\phi$  PIN.
3. BARS R-1 SHALL BE FABRICATED CONTINUOUSLY. R-2 BARS SHALL BE FABRICATED WITH 2'-0" MINIMUM LAPS AS SHOWN ON THE DETAIL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
UNANCHORED PRECAST CONCRETE BARRIER  
FOR TEMPORARY TRAFFIC CONTROL

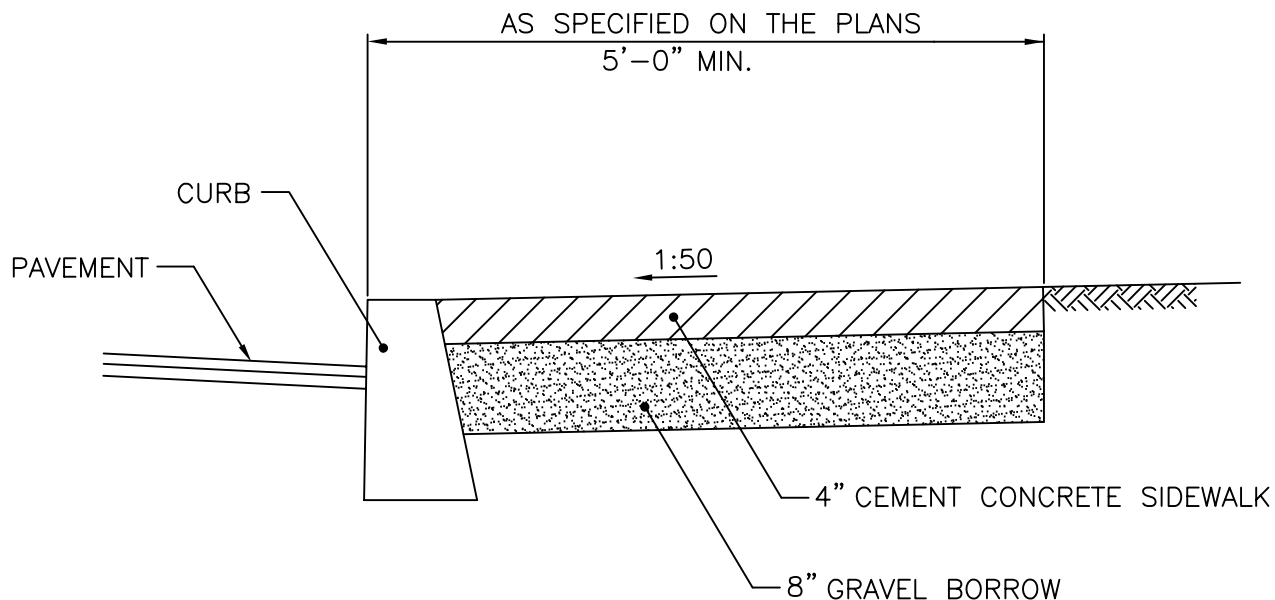
REVISIONS		
NO.	BY	DATE
1	MLP	Oct 05

*James H. Casaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
40.5.0



#### NOTES

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

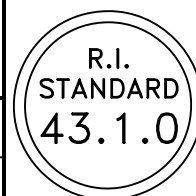
REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

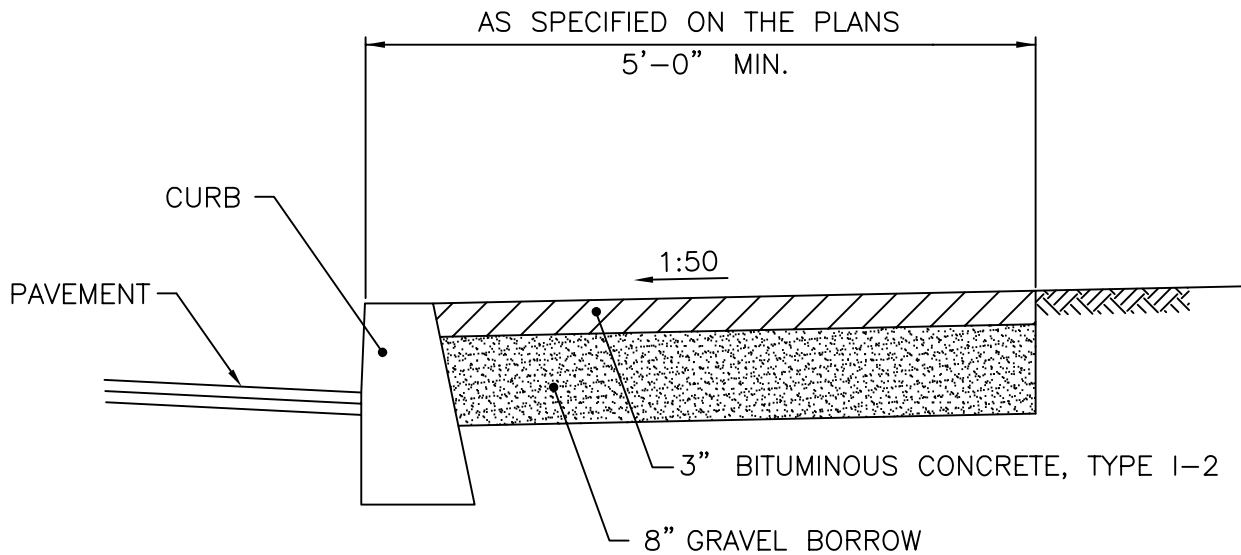
### CEMENT CONCRETE SIDEWALK

*James H. Casabadi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	3/1/2005

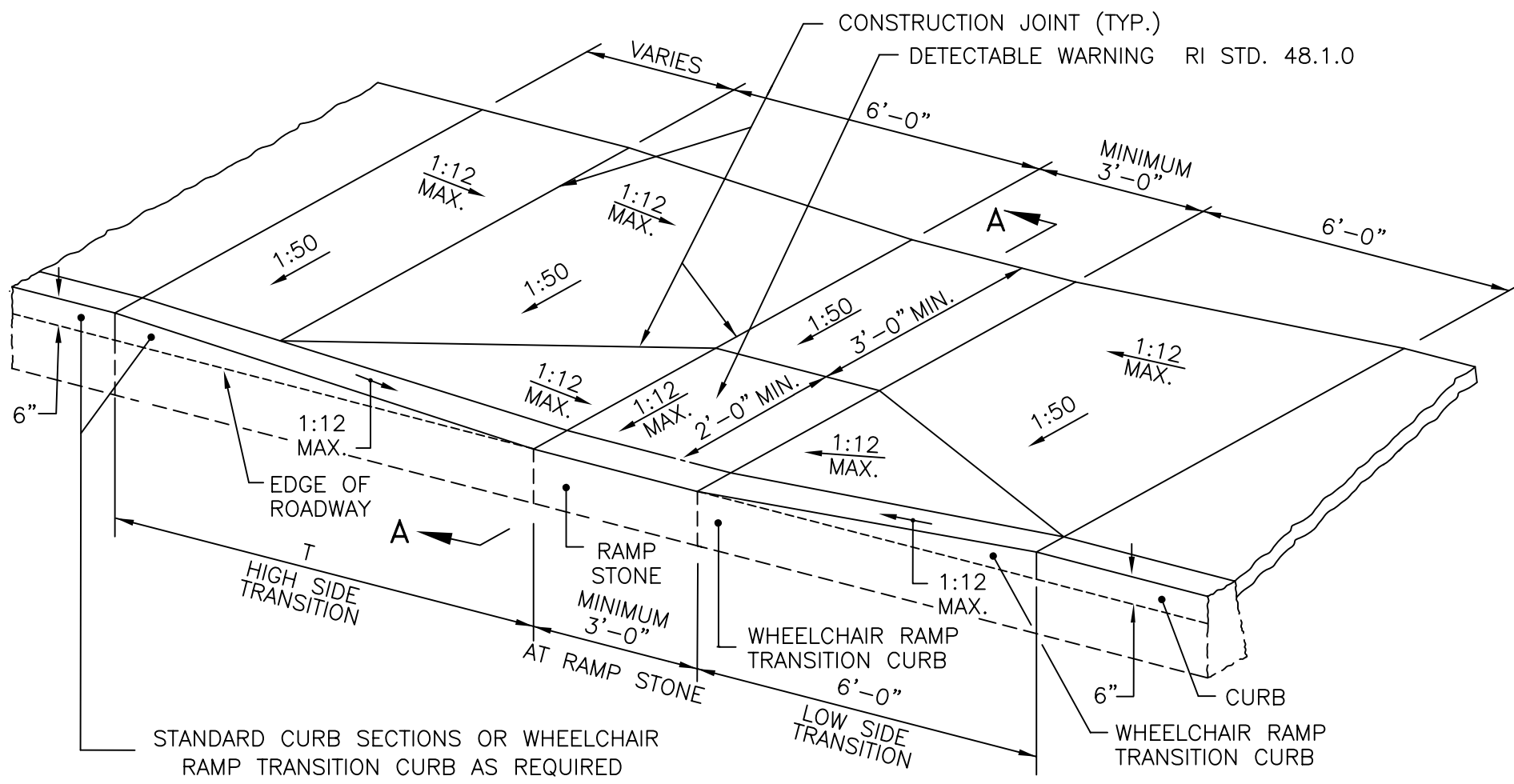
BITUMINOUS CONCRETE SIDEWALK

*James H. Capaldi*  
 CHIEF ENGINEER  
 TRANSPORTATION

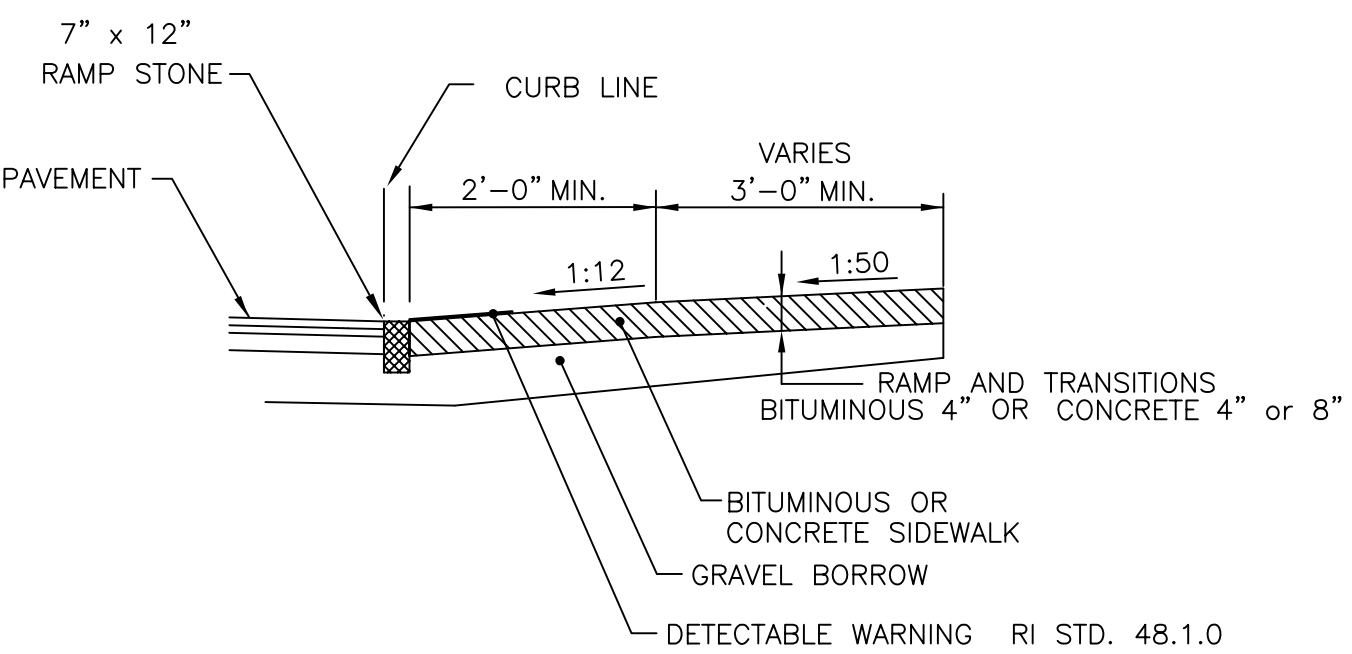
*Edmund J. Parker Jr.*  
 CHIEF DESIGN ENGINEER  
 TRANSPORTATION

JUNE 15, 1998  
 ISSUE DATE





ISOMETRIC VIEW  
NOT TO SCALE



SECTION A-A  
NOT TO SCALE

ROADWAY PROFILE GRADE	T (FT.)
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0

- NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.
  2. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
  3. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
  4. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
  5. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
  6. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
  7. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.
  8. THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
  9. WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
  10. IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
  11. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
  12. THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
  13. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
  14. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
  15. DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATIONS
  16. 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	Oct 05

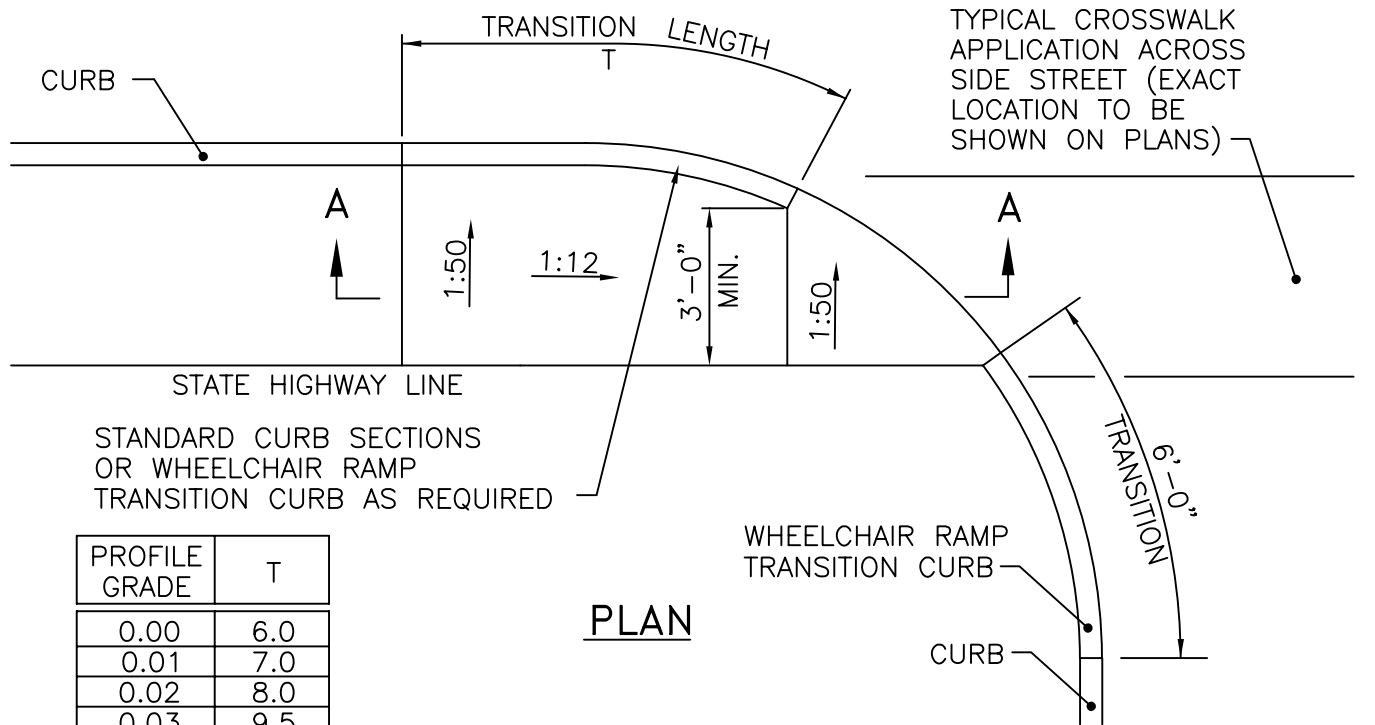
*James R. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

WHEELCHAIR RAMP

*Edmund J. Parker*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

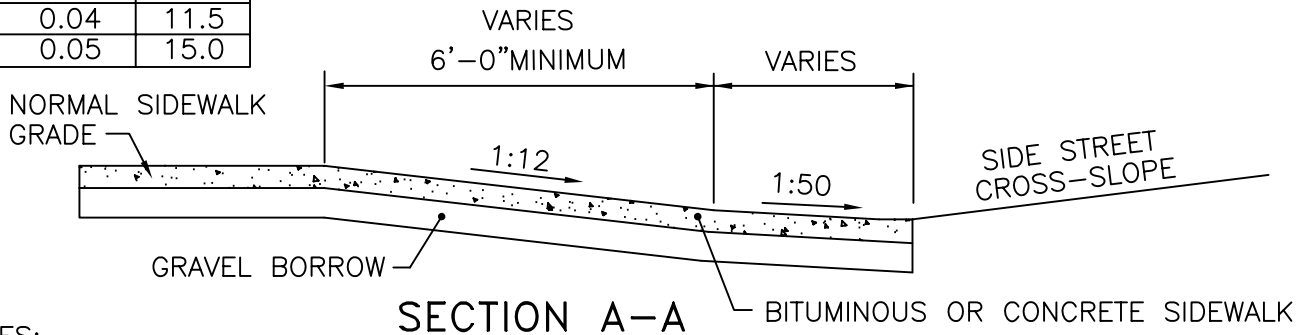
JUNE 15, 1998  
ISSUE DATE





PROFILE GRADE	T
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0

### PLAN



### SECTION A-A

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
2. THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT-OF-WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
3. WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION WILL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
4. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
5. DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
6. LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
7. ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
8. WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
9. THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
10. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
11. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS

REVISIONS		
NO.	BY	DATE
1	MLP	Dec 05

*James A. Casabadi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

DRIVEWAY DEVELOPMENT FOR  
6'-0" TRANSITION CURB

CHIEF ENGINEER  
TRANSPORTATION

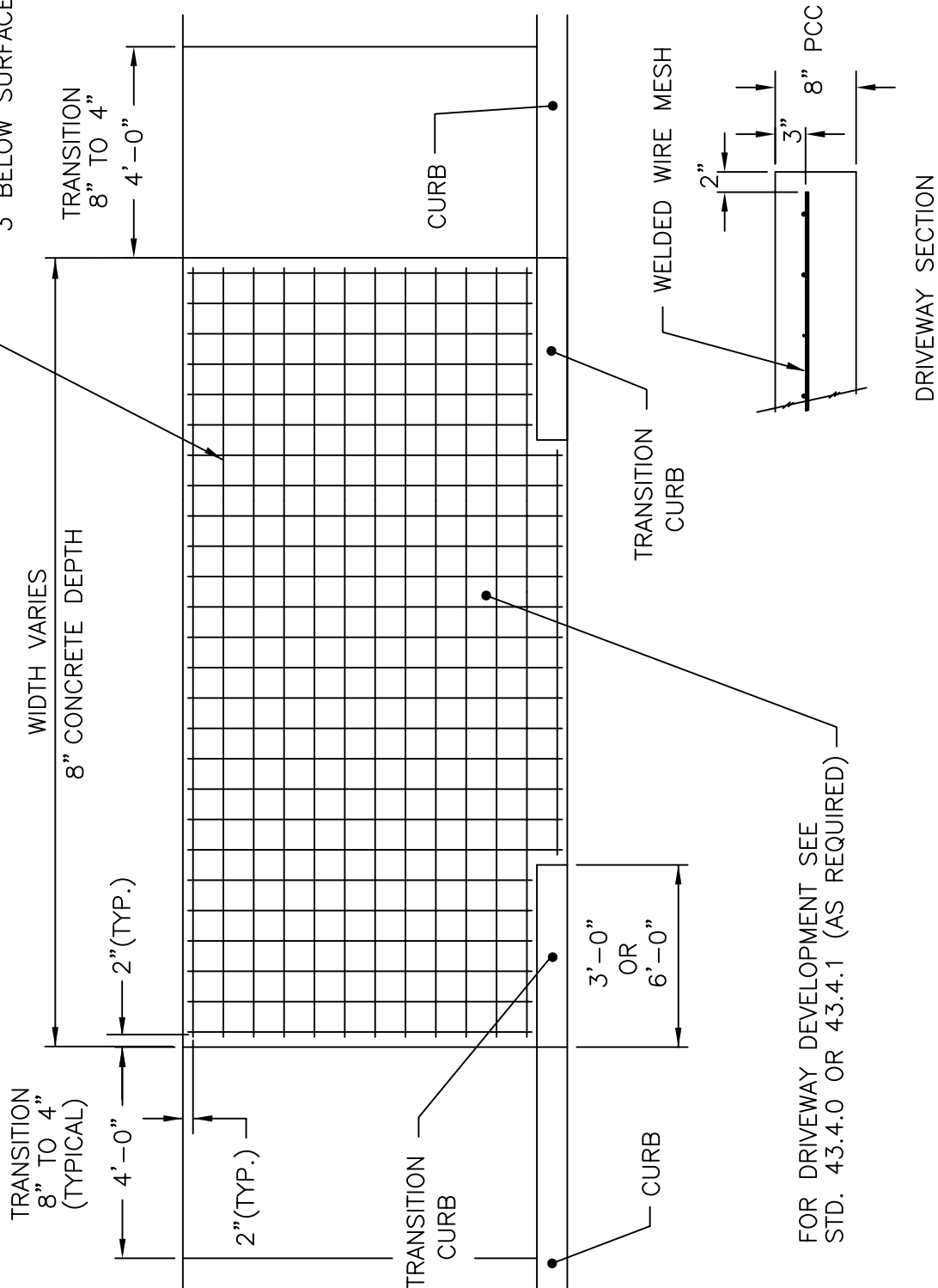
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
43.4.1



6" x 6" - W4 x W4  
WELED WIRE MESH  
3" BELOW SURFACE



FOR DRIVEWAY DEVELOPMENT SEE  
STD. 43.4.0 OR 43.4.1 (AS REQUIRED)

**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CEMENT CONCRETE DRIVEWAYS**

**REVISIONS**

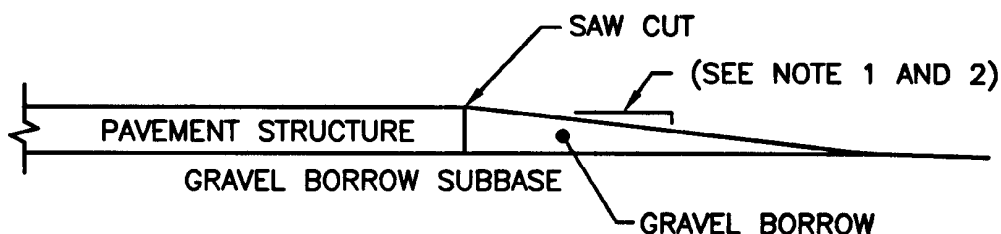
NO.	BY	DATE
1	MLP	1/10/05

*James A. Casabadi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



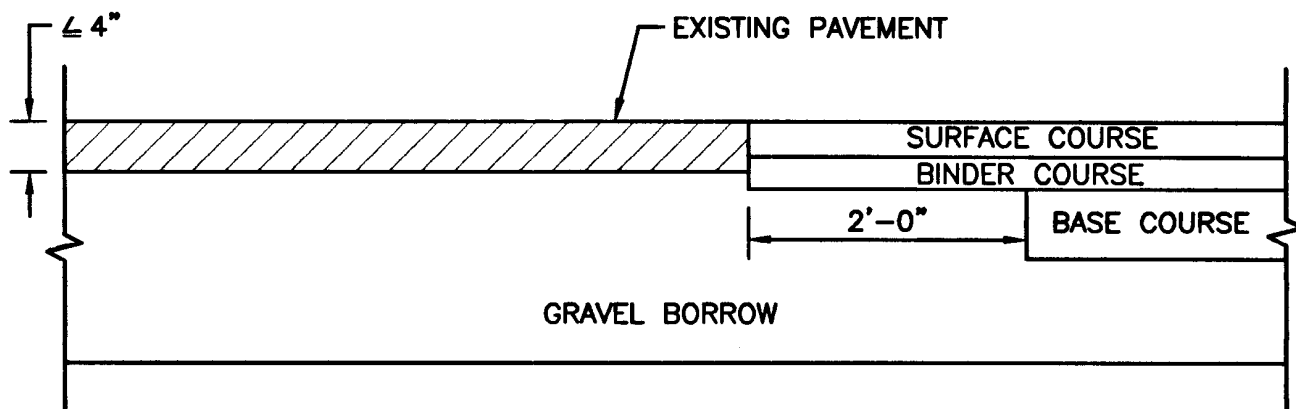


**NOTES:**

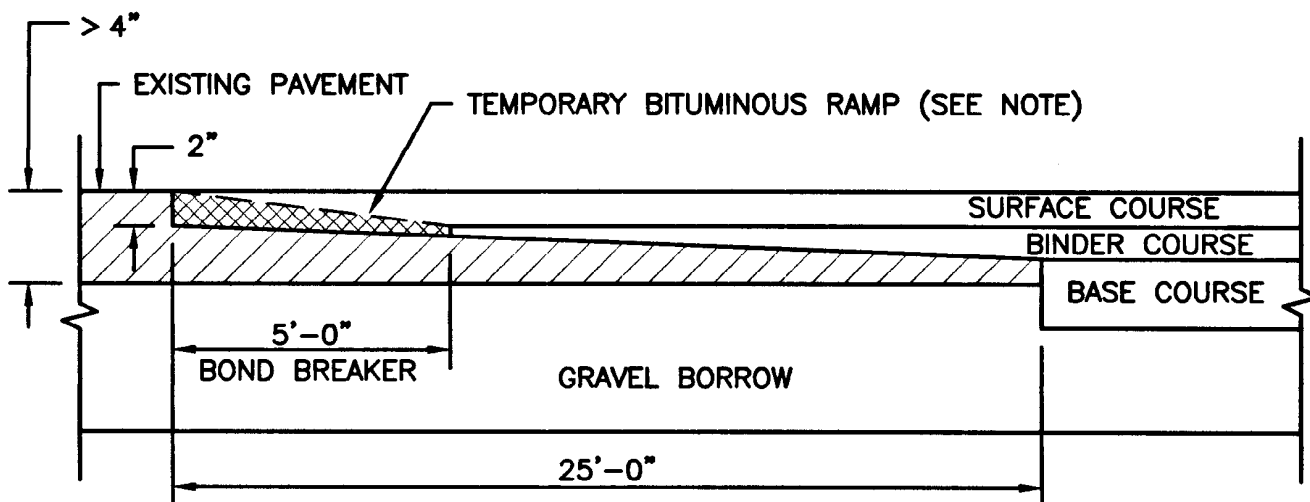
1. TRANSVERSE DROP-OFF:  
 POSTED SPEED  $\leq$  35 M.P.H.: 5 FEET HORIZONTALLY TO 1 INCH VERTICALLY  
 POSTED SPEED  $>$  35 M.P.H.: 10 FEET HORIZONTALLY TO 1 INCH VERTICALLY
2. LONGITUDINAL DROP-OFF (OUTSIDE EDGES OF PAVEMENT):  
 POSTED SPEED  $\leq$  35 M.P.H.: DROP-OFFS  $>$  3" BUT  $<$  5" SHALL BE TAPERED TO A 1:1 OR FLATTER SLOPE TO EXISTING GROUND.  
 ALL DROP-OFFS  $\geq$  5" SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.  
 POSTED SPEED  $>$  35 M.P.H.: LONGITUDINAL DROP-OFFS WILL NOT BE PERMITTED WITHIN 2'-0" OF A TRAVEL LANE. THIS AREA MUST BE AT GRADE WITH THE TRAVEL LANE. HOWEVER, SHOULD THE CONTRACTOR'S APPROVED SEQUENCE OF OPERATIONS RESULT IN OVERNIGHT DROP-OFFS GREATER THAN THREE INCHES OCCURRING BETWEEN 2'-0" TO 6'-0" FROM A TRAVEL LANE, THEN THE DROP-OFFS SHALL BE TAPERED TO A 4:1 OR FLATTER SLOPE TO EXISTING GROUND.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			<b>PAVEMENT REMOVAL DROP-OFF DETAIL</b>		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; width: 80px; margin: 0 auto;">           R.I. STANDARD <b>47.1.0</b> </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <small>CHIEF ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <small>CHIEF DESIGN ENGINEER TRANSPORTATION</small> </div> <div style="text-align: center;"> <b>JUNE 15, 1998</b>  <small>ISSUE DATE</small> </div> </div>		



EXISTING PAVEMENT DEPTH  $\leq 4"$



EXISTING PAVEMENT DEPTH  $> 4"$

**NOTE:**

A BOND BREAKER (TAPERED OR EQUIVALENT) WILL BE PLACED 5'-0" FROM THE JOINT AND COVERED WITH THE BINDER COURSE AS THE TEMPORARY RAMP. PRIOR TO PLACING THE SURFACE COURSE, THE BINDER COURSE AND BOND BREAKER WILL BE REMOVED.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

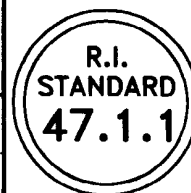
REVISIONS		
NO.	BY	DATE

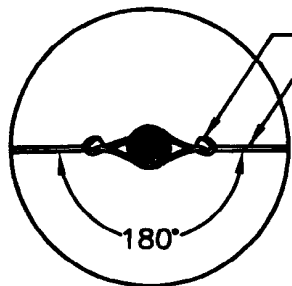
**TRANSVERSE PAVEMENT  
CUT AND MATCH**

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

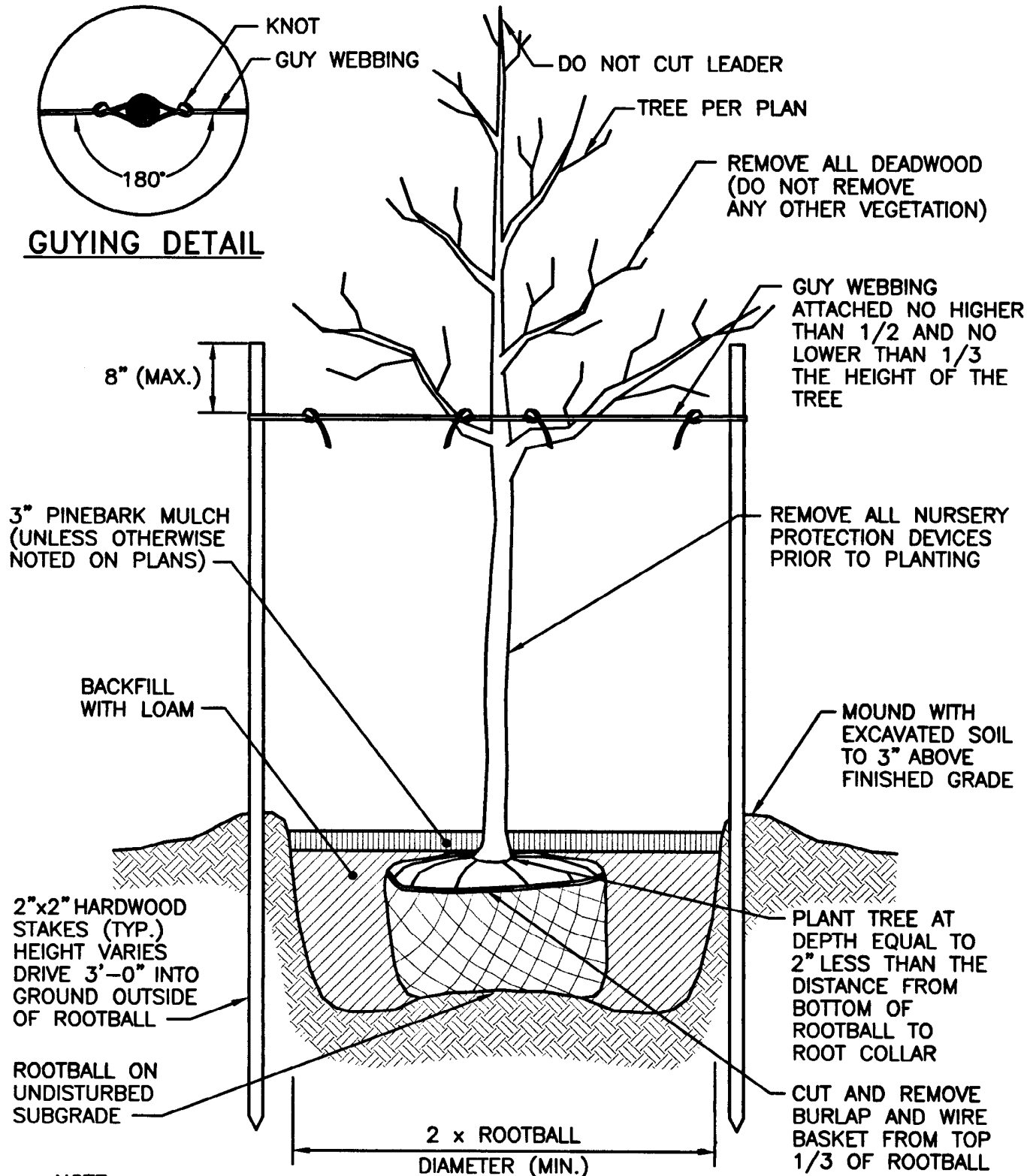
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

**JUNE 15, 1998**  
ISSUE DATE





## GUYING DETAIL



### NOTE:

SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

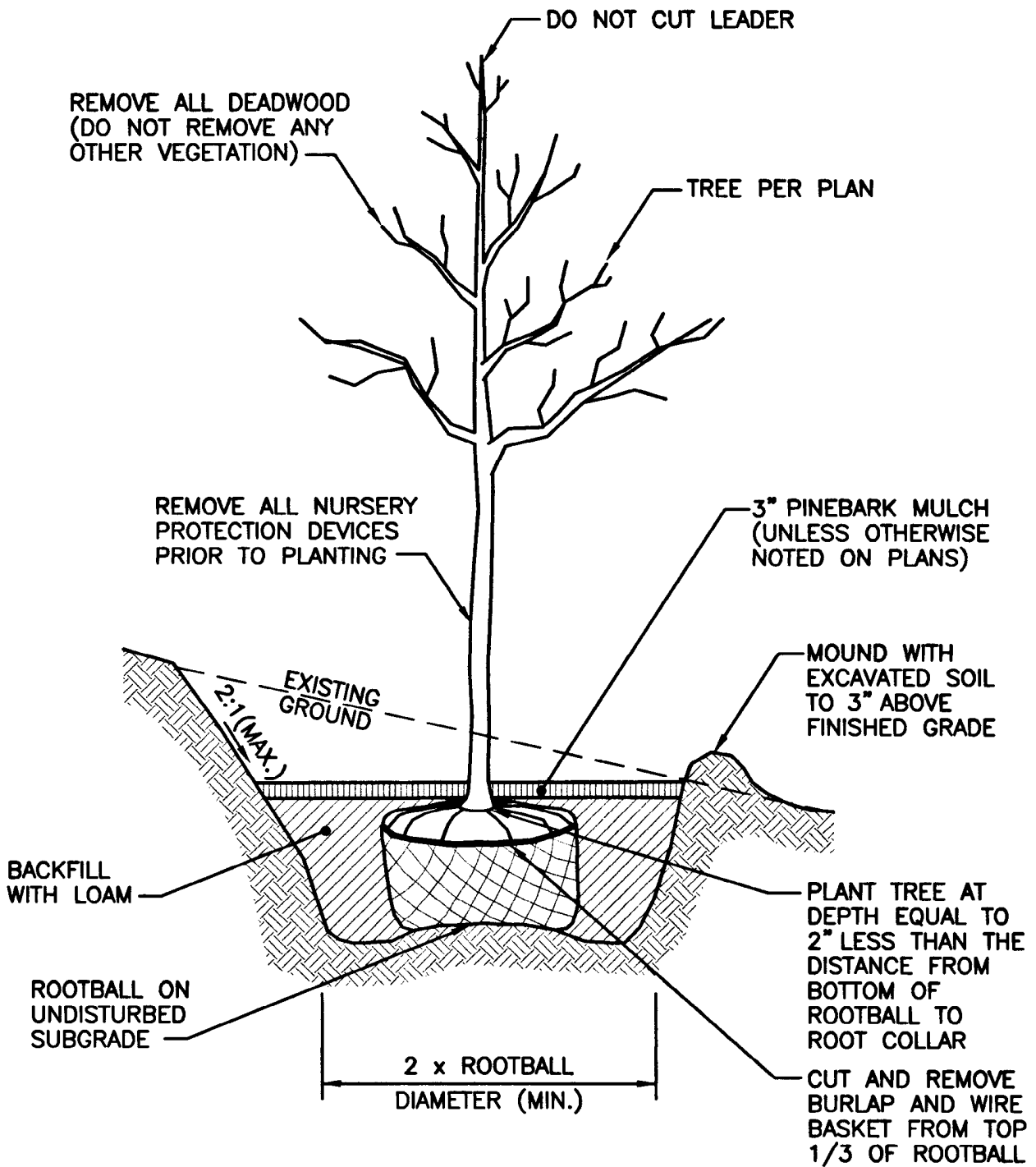
## LARGE TREE STAKING AND PLANTING DETAIL (2" CALIPER AND GREATER)

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR STAKING DETAIL SEE STD. 50.1.0

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**TREE PLANTING ON SLOPE**

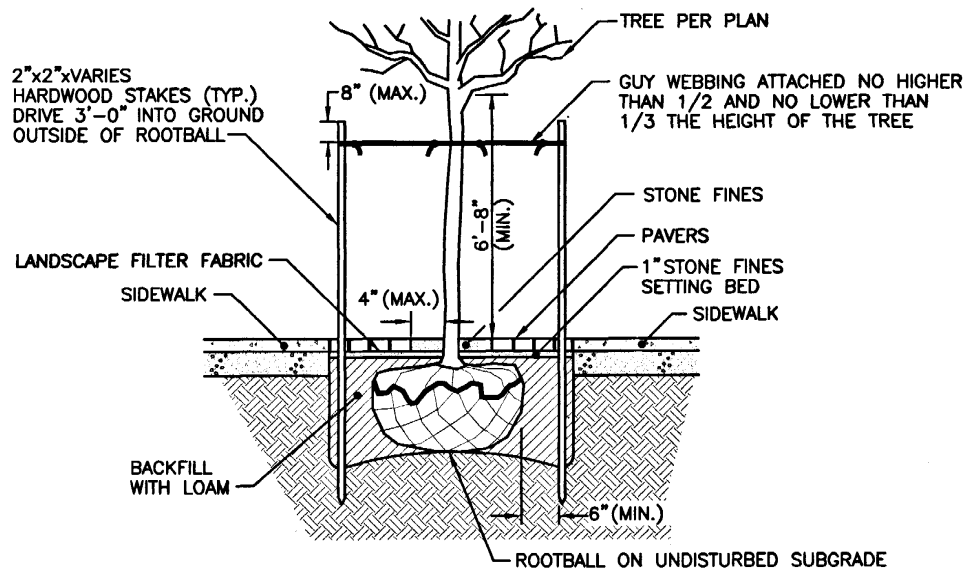
REVISIONS		
NO.	BY	DATE

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

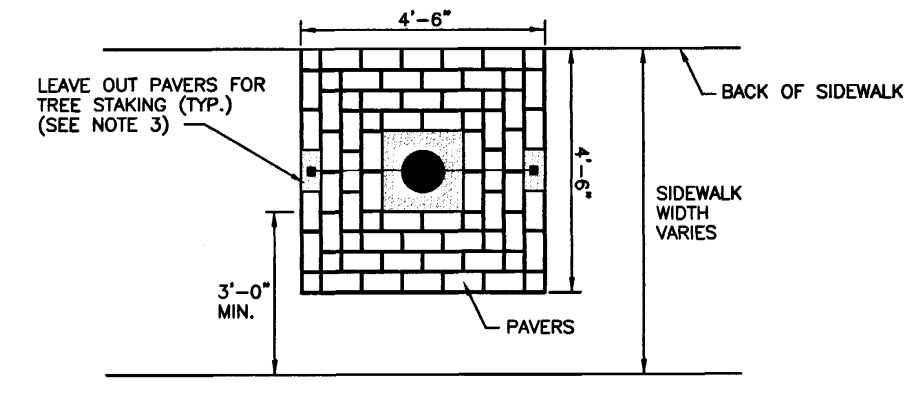
*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

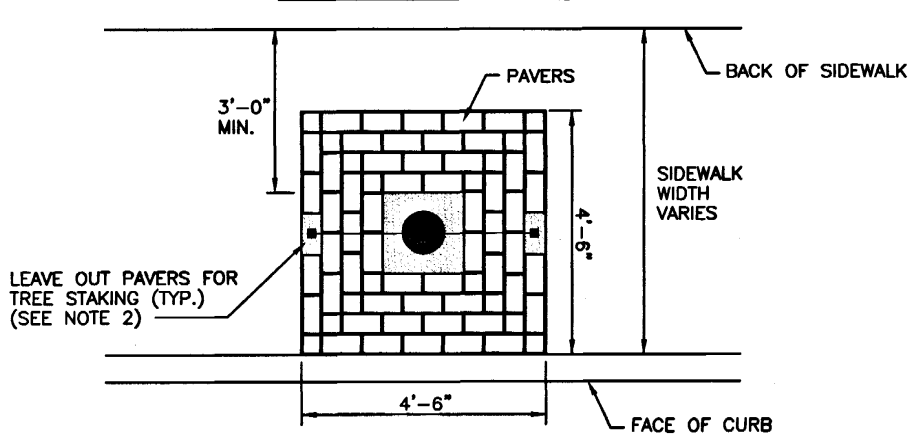




### SECTION



### BACK OF SIDEWALK



### BACK OF CURB

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTIONS L.06 AND L.12 OF THE R.I. STANDARD SPECIFICATIONS.
2. STAKES SHOULD BE LOCATED PARALLEL TO ROAD AND SIDEWALK.
3. AFTER THE GUARANTEE PERIOD THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF STAKES AND GUY WEBBING, AND FOR THE INSTALLATION OF PAVERS PREVIOUSLY LEFT OUT FOR STAKING.

### RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### PAVER DETAIL AROUND NEW TREES

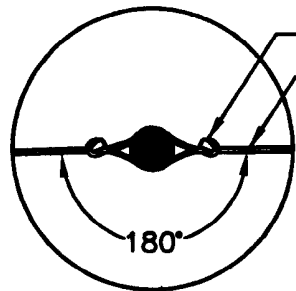
REVISIONS		
NO.	BY	DATE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

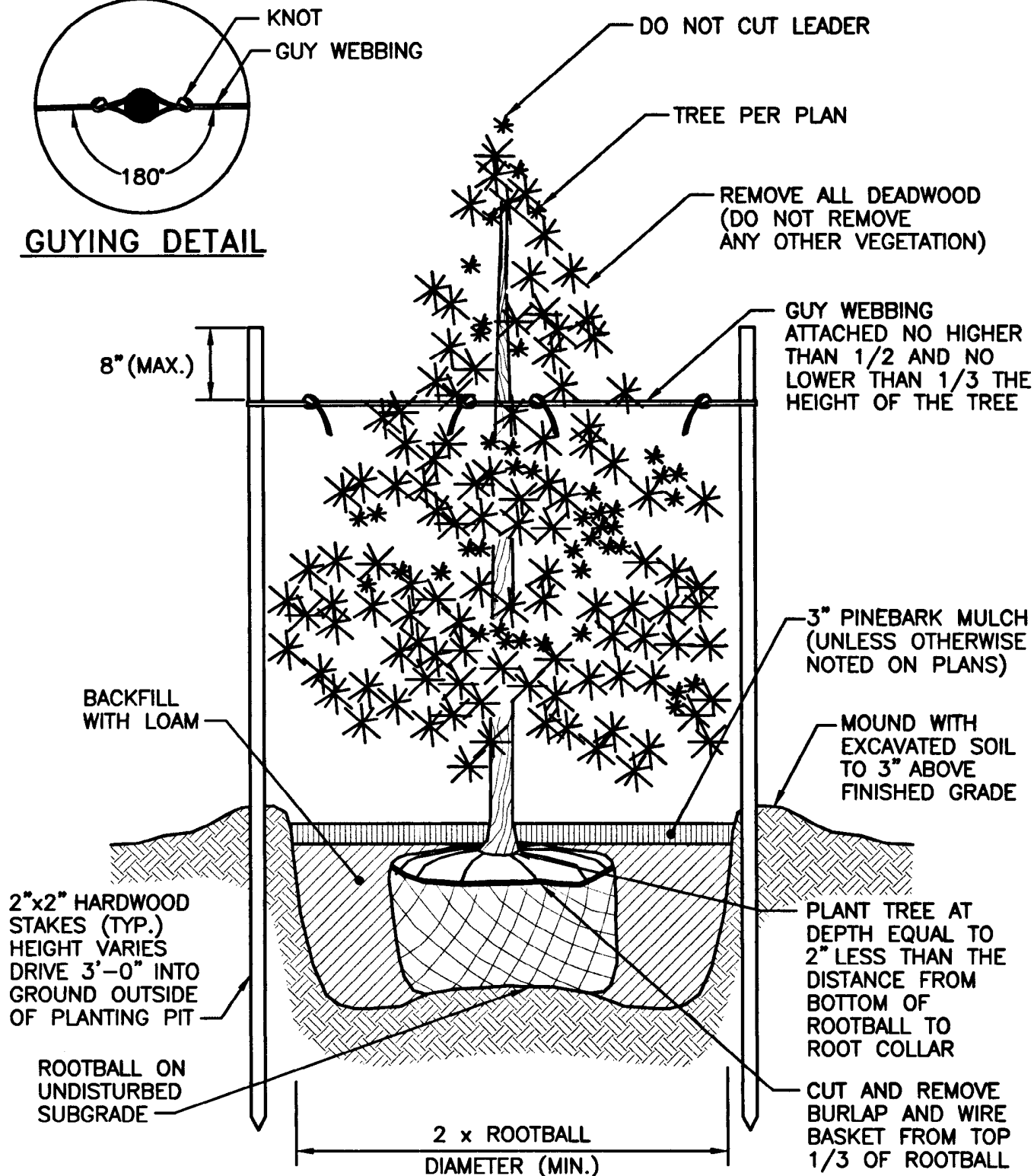
*Edward J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





## GUYING DETAIL



### NOTE:

SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### EVERGREEN TREE PLANTING DETAIL (4'-0" HIGH AND GREATER)

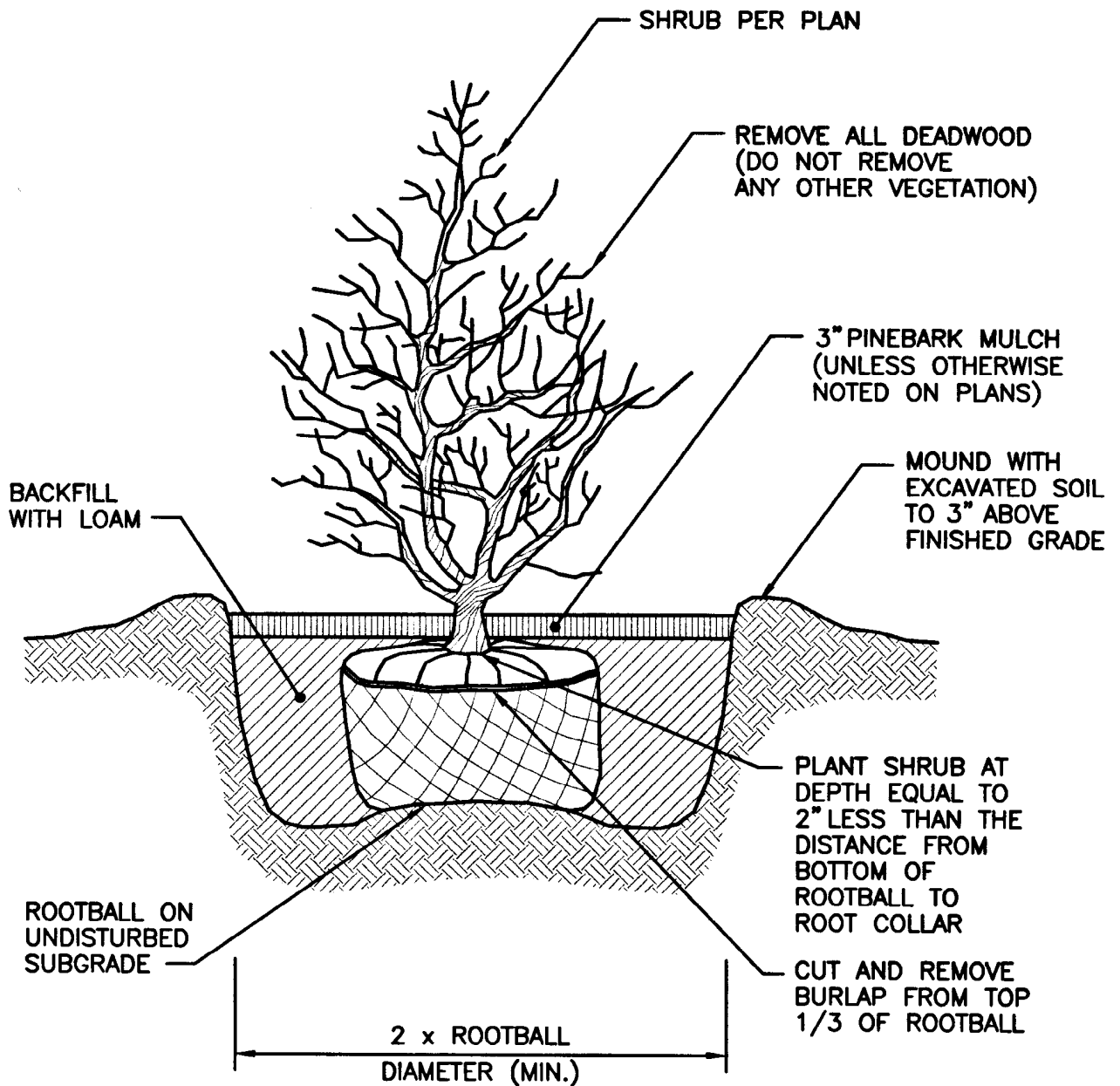
REVISIONS		
NO.	BY	DATE

*James A. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
50.2.0



**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### BALL AND BURLAP SHRUB PLANTING DETAIL

REVISIONS		
NO.	BY	DATE

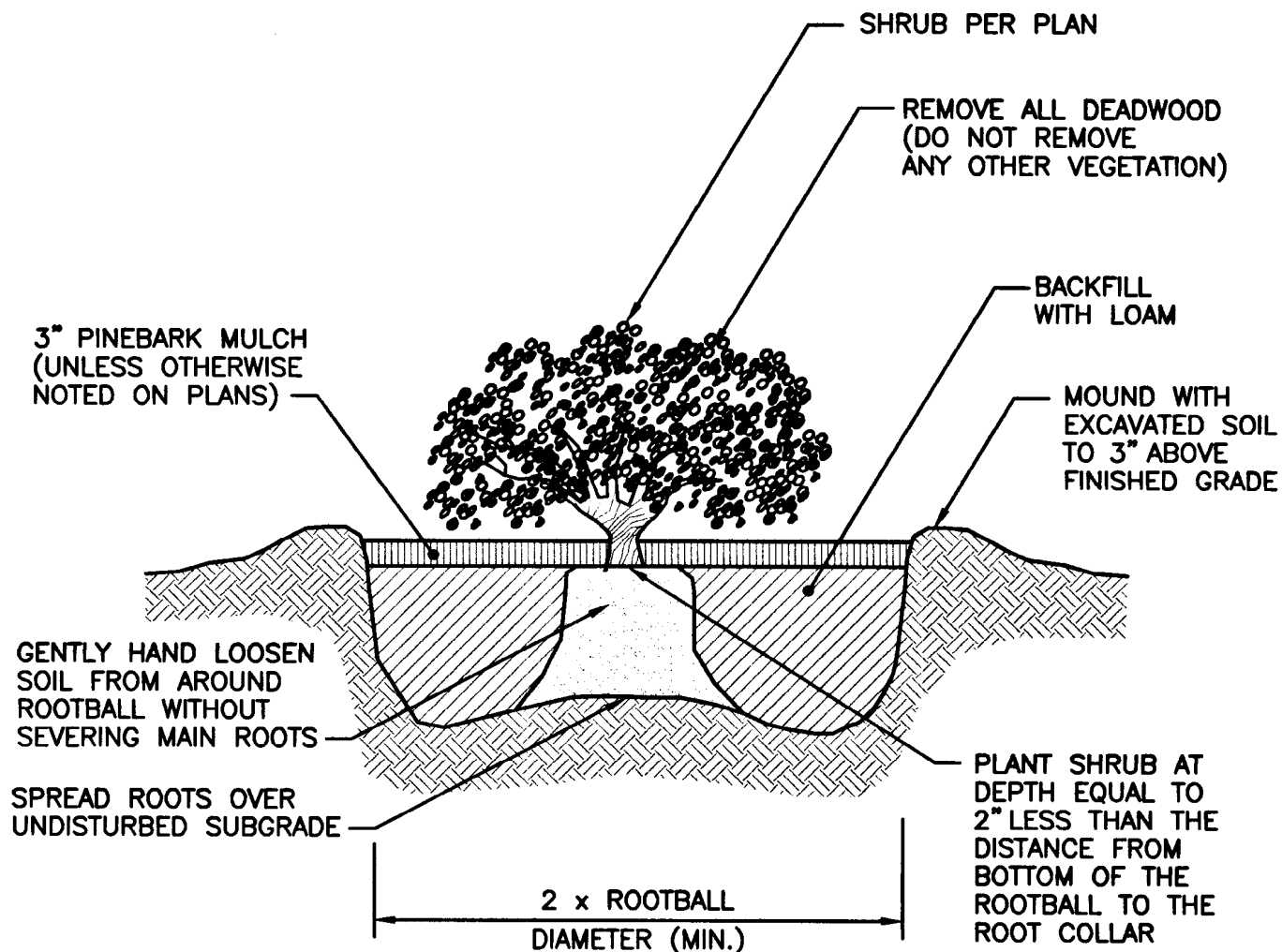
*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

**CONTAINER GROWN  
SHRUB PLANTING DETAIL**

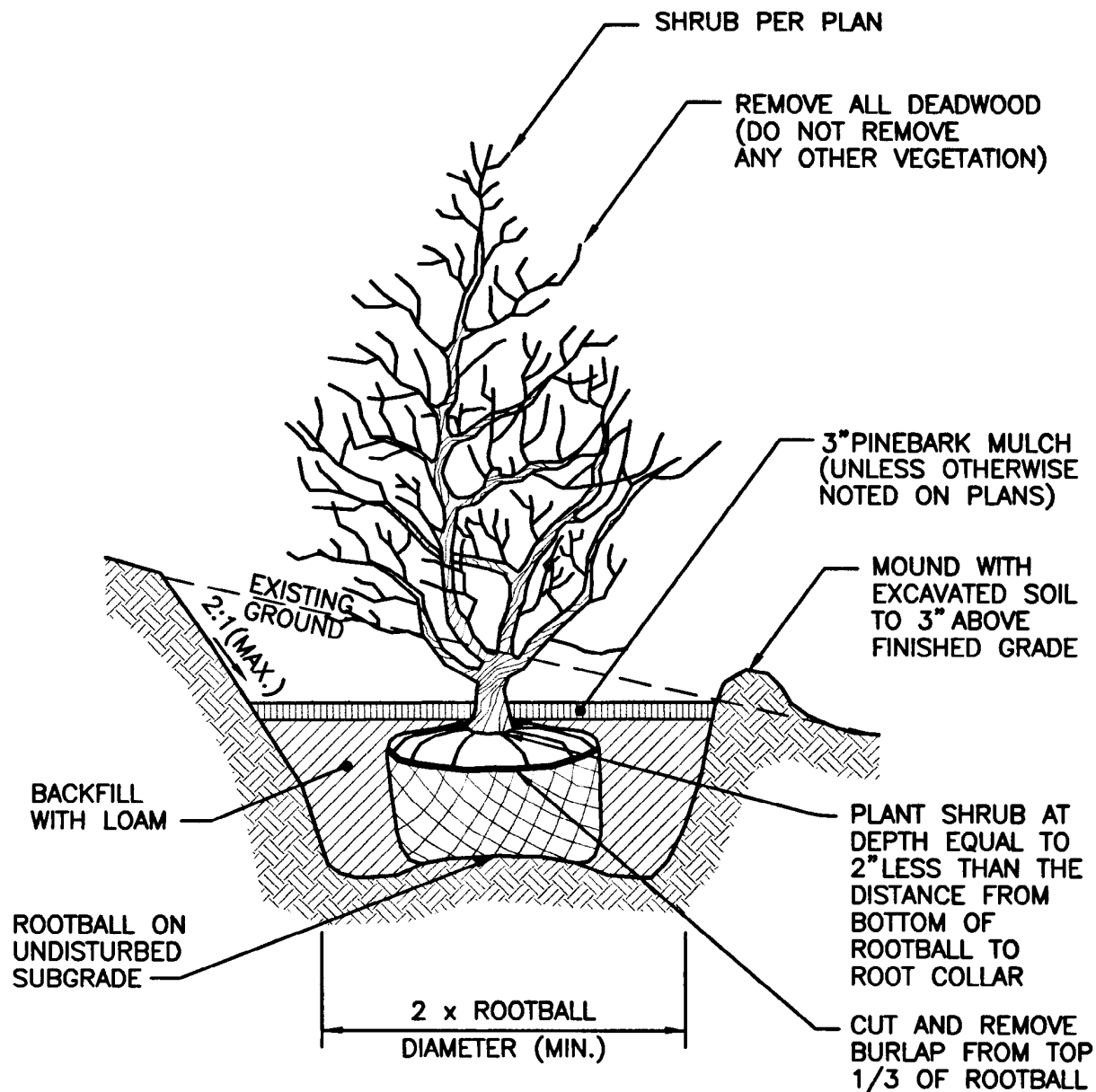
REVISIONS		
NO.	BY	DATE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

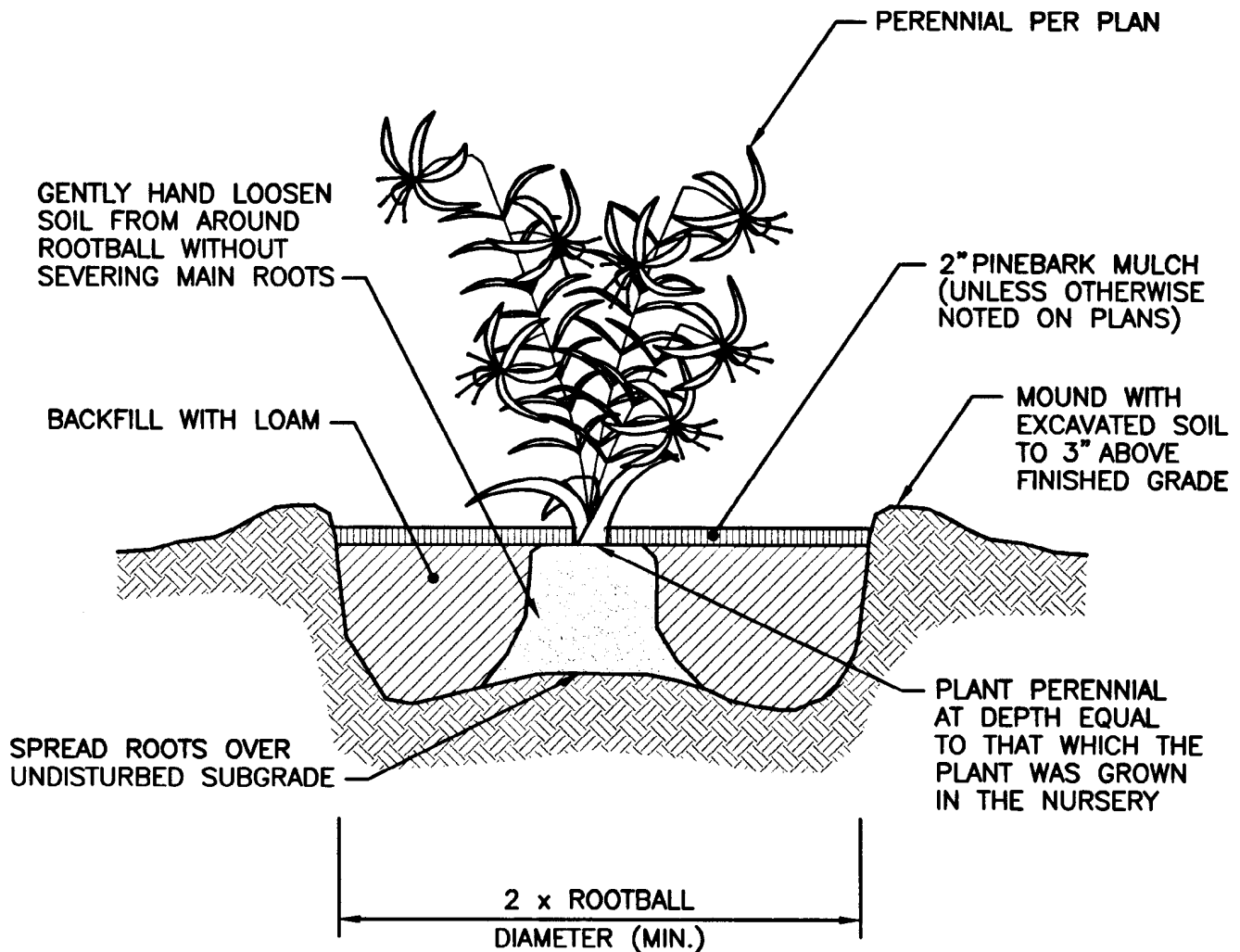
### SHRUB PLANTING ON SLOPE

*James A. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

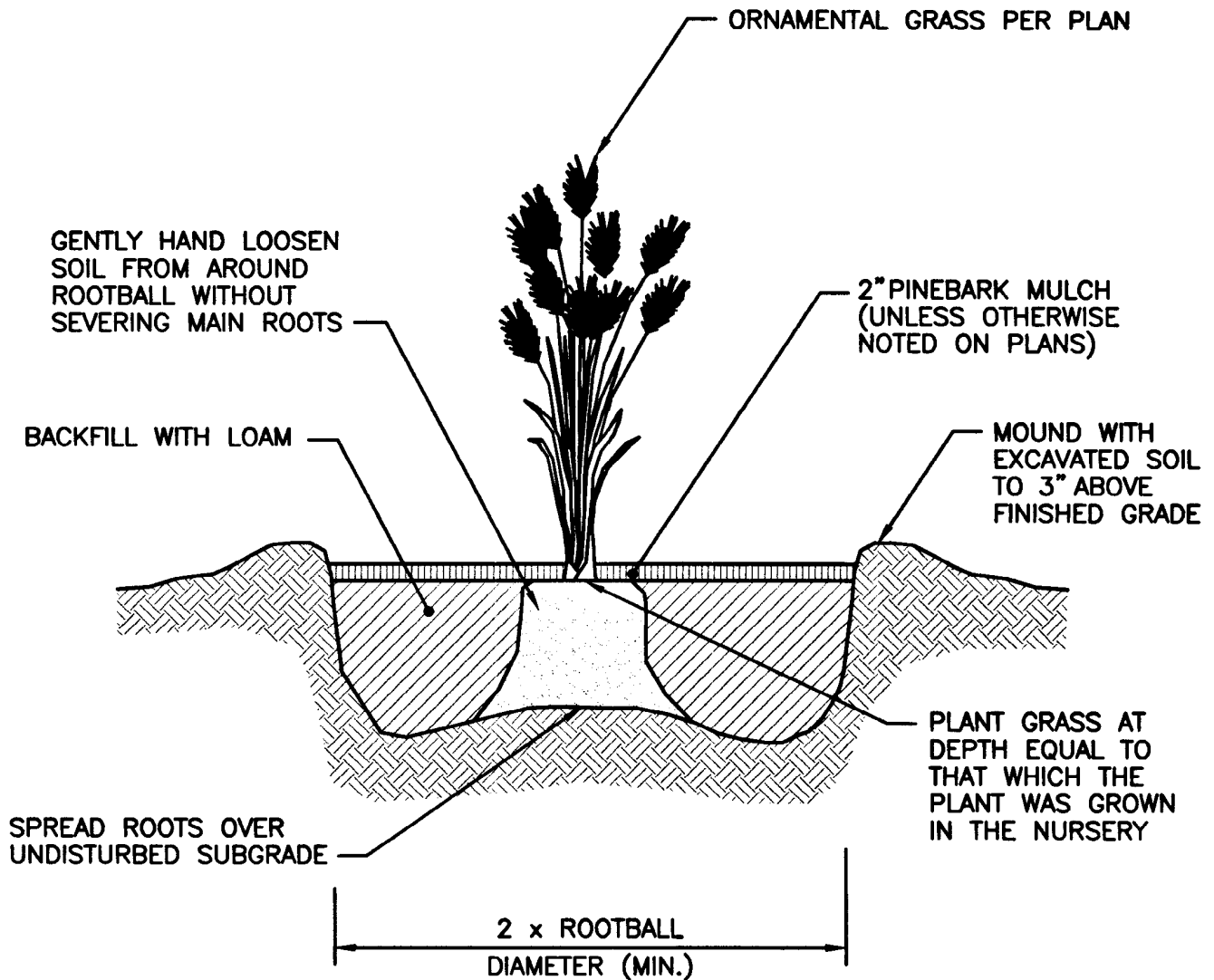
### PERENNIAL PLANTING DETAIL

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

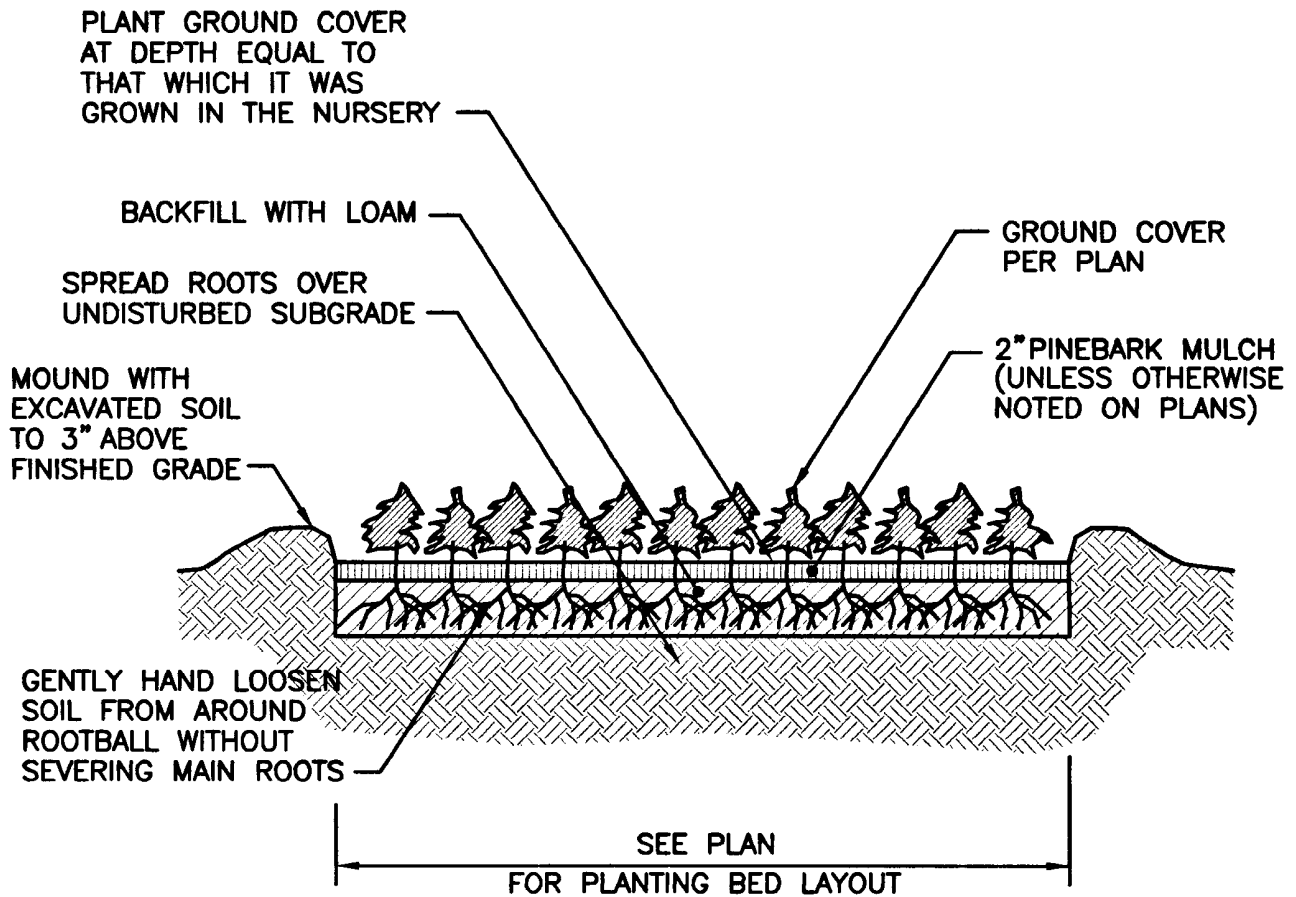




**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			ORNAMENTAL GRASS PLANTING DETAIL	<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>50.5.0</b> </div>
NO.	BY	DATE		
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">   CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998  ISSUE DATE </div> </div>	



**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

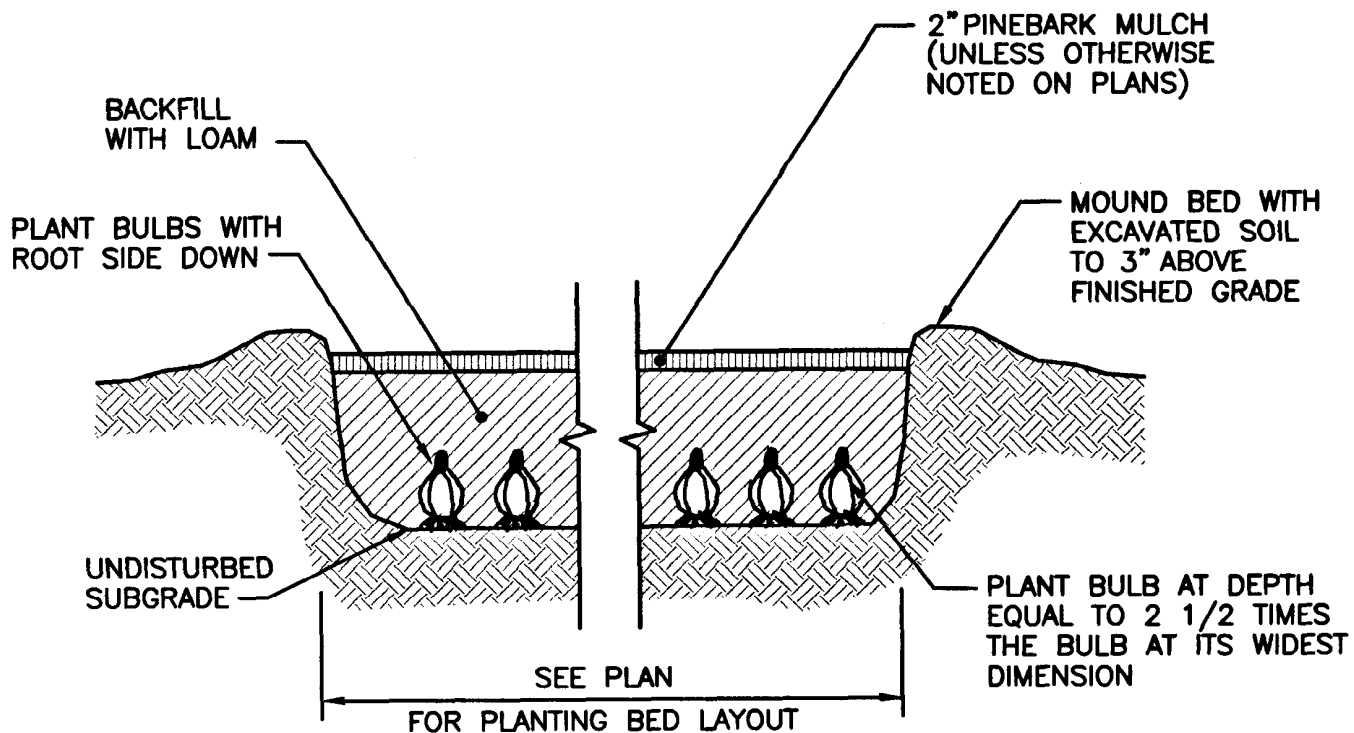
**GROUND COVER PLANTING DETAIL**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE



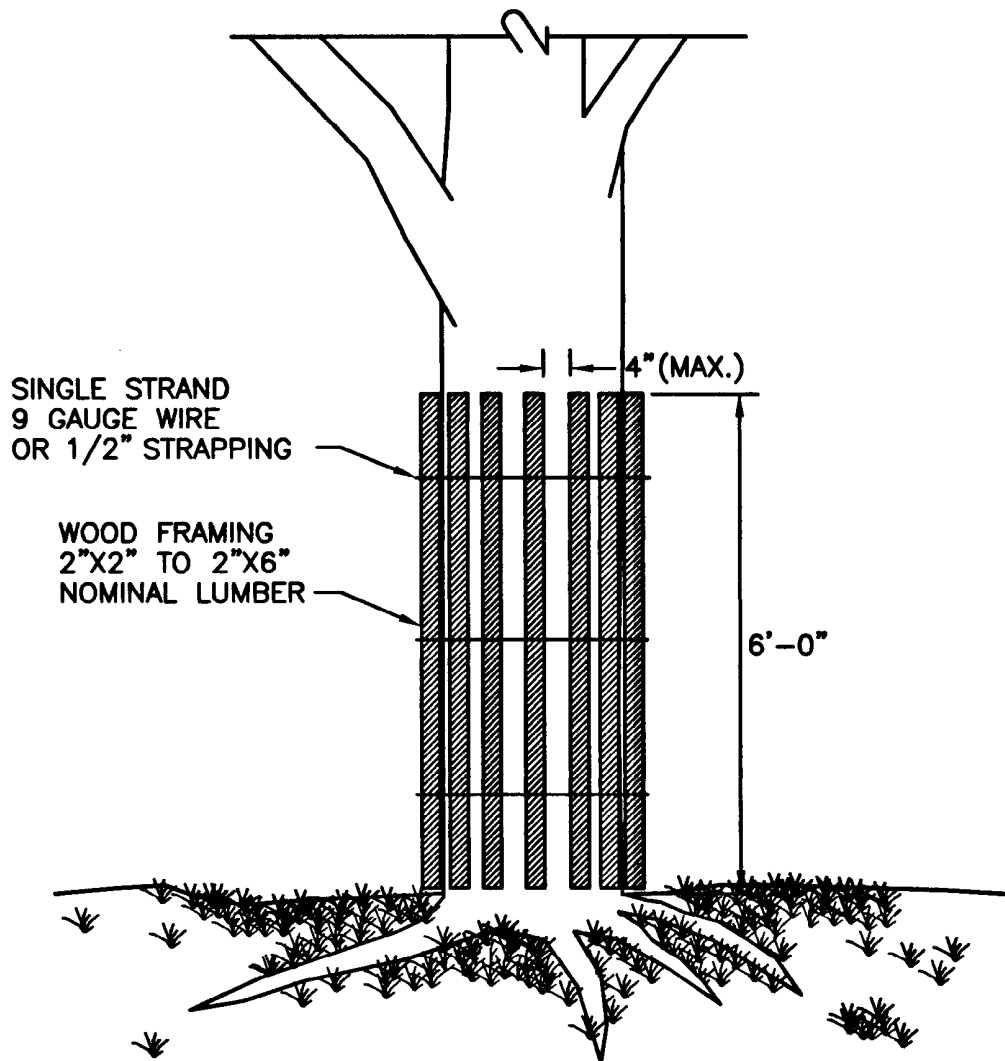


**NOTES:**

1. SHALL BE IN ACCORDANCE WITH SECTION L.06 OF THE R.I. STANDARD SPECIFICATIONS.
2. BY HAND, SPREAD BONE MEAL OVER ENTIRE PLANTING BED AT A RATE NOT TO EXCEED 1/2 LB. PER 25 SQ. FT.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS			BULB PLANTING DETAIL	<div><div>R.I. STANDARD 50.7.0</div></div>	
NO.	BY	DATE			
			<div><div><div>John A. Czapala</div><div>CHIEF ENGINEER TRANSPORTATION</div></div><div><div>Edmund Parker Jr.</div><div>CHIEF DESIGN ENGINEER TRANSPORTATION</div></div></div>		JUNE 15, 1998 ISSUE DATE



**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

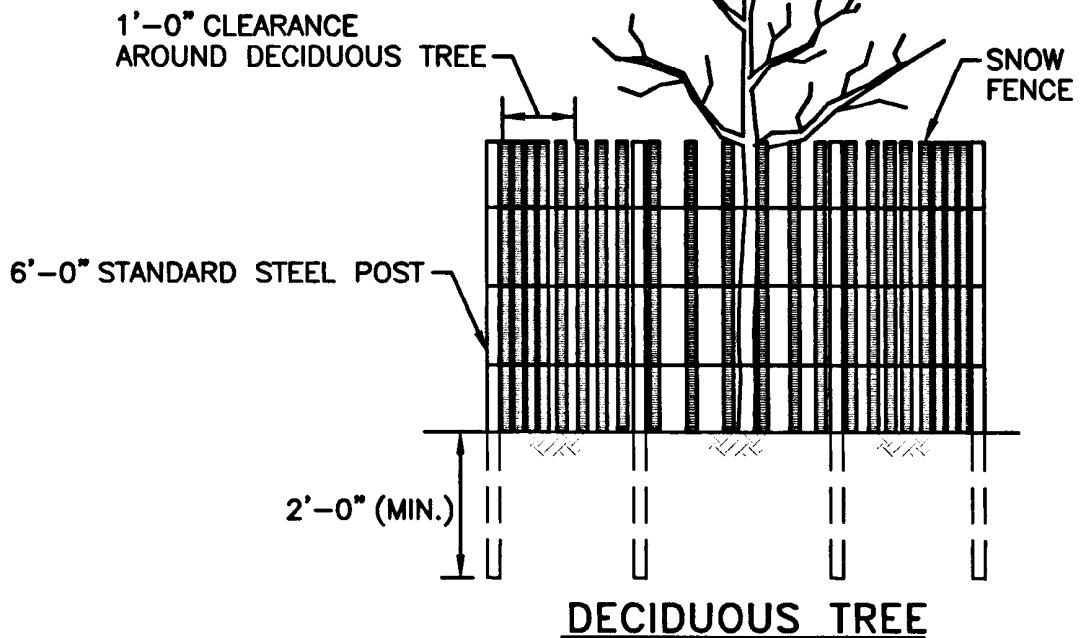
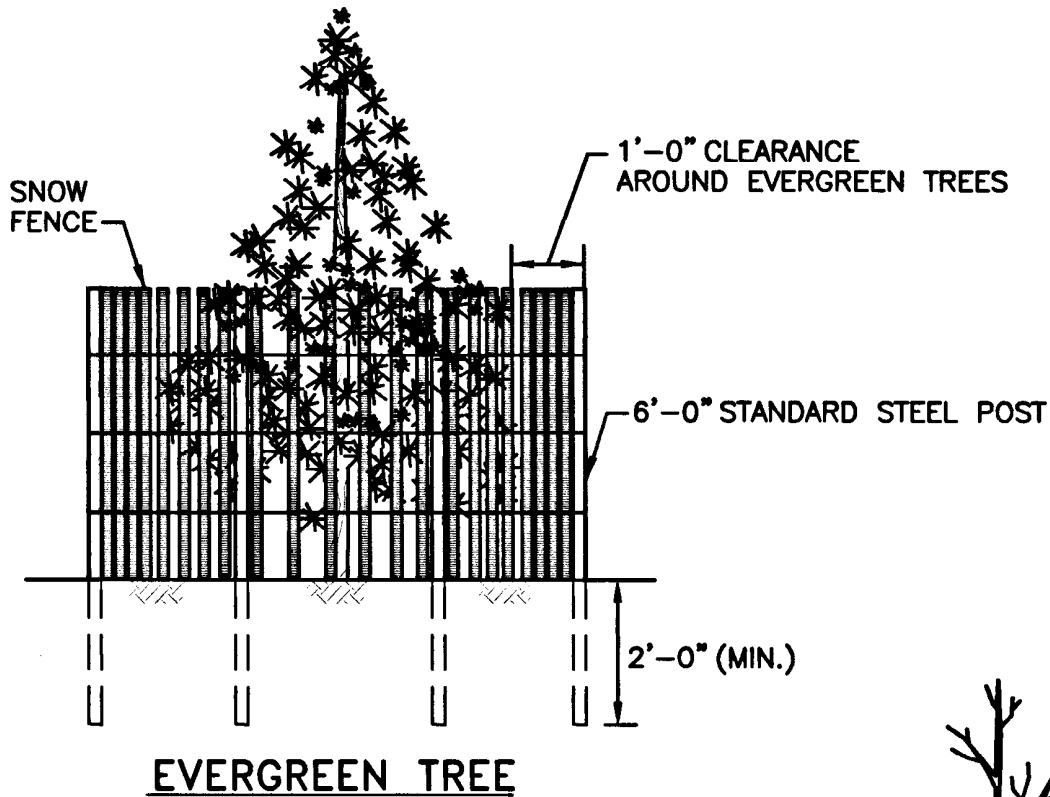
**TREE PROTECTION DEVICE**

*James H. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE





**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE

### DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES

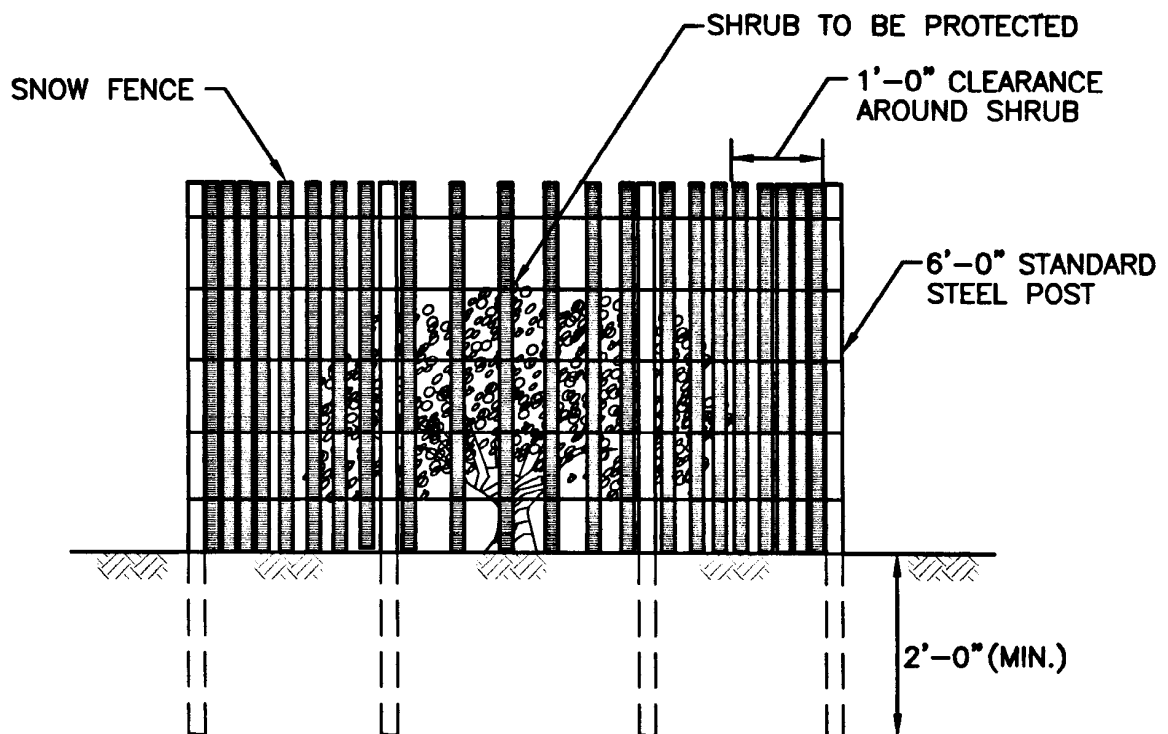
*James A. Gagliardi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







**NOTE:**  
SHALL BE IN ACCORDANCE WITH SECTION L.11 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

### REVISIONS

NO.	BY	DATE

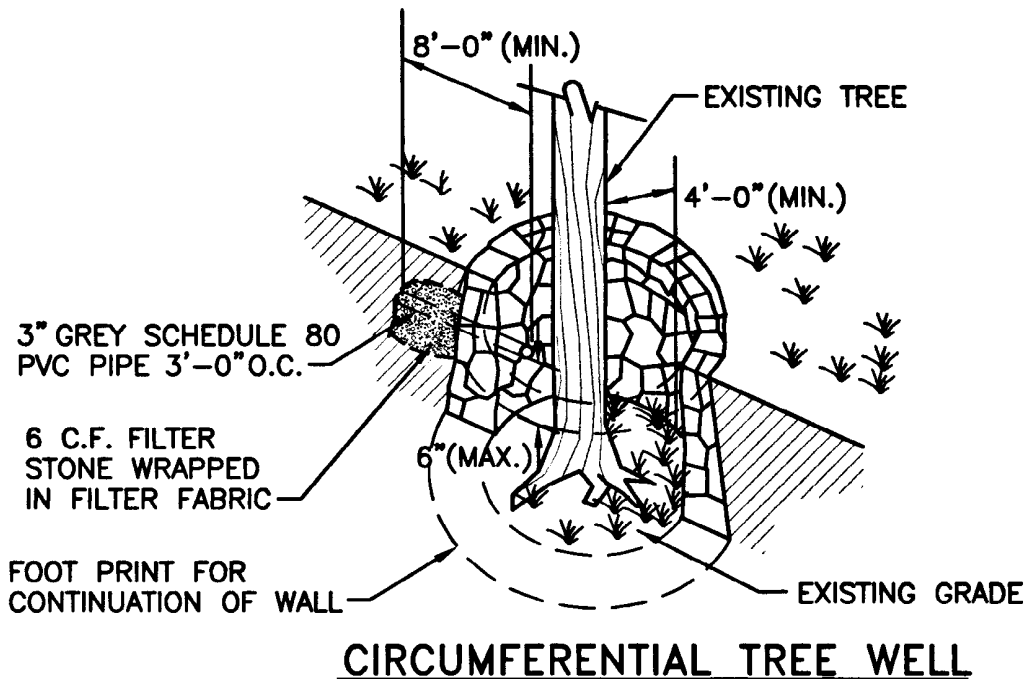
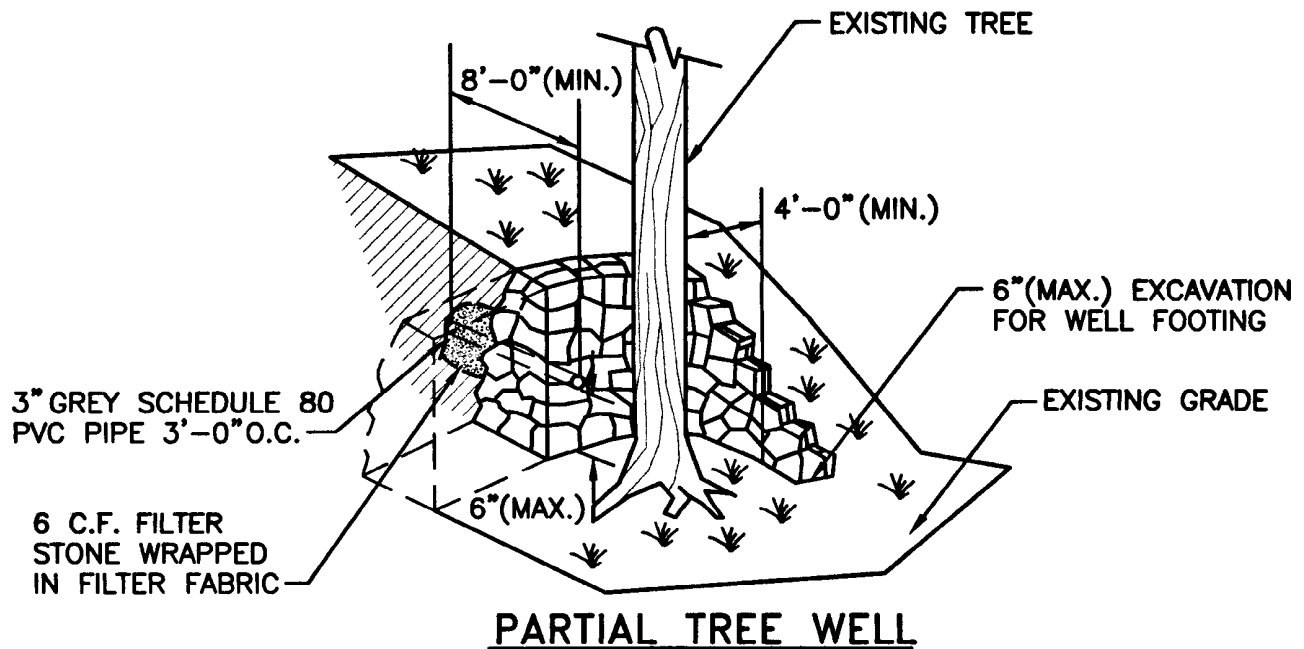
## SHRUB PROTECTION DEVICE

*James H. Gualdi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund J. Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

R.I.  
STANDARD  
51.2.0



**NOTE:**

SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION**

REVISIONS		
NO.	BY	DATE

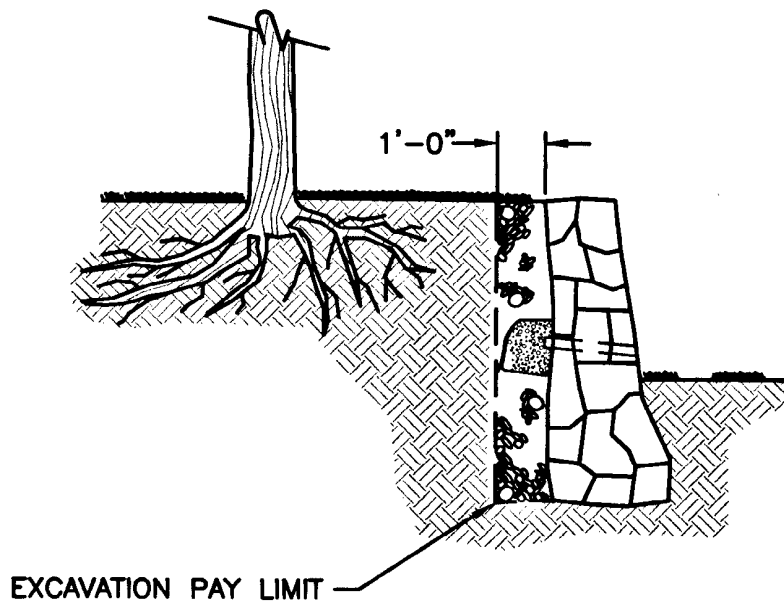
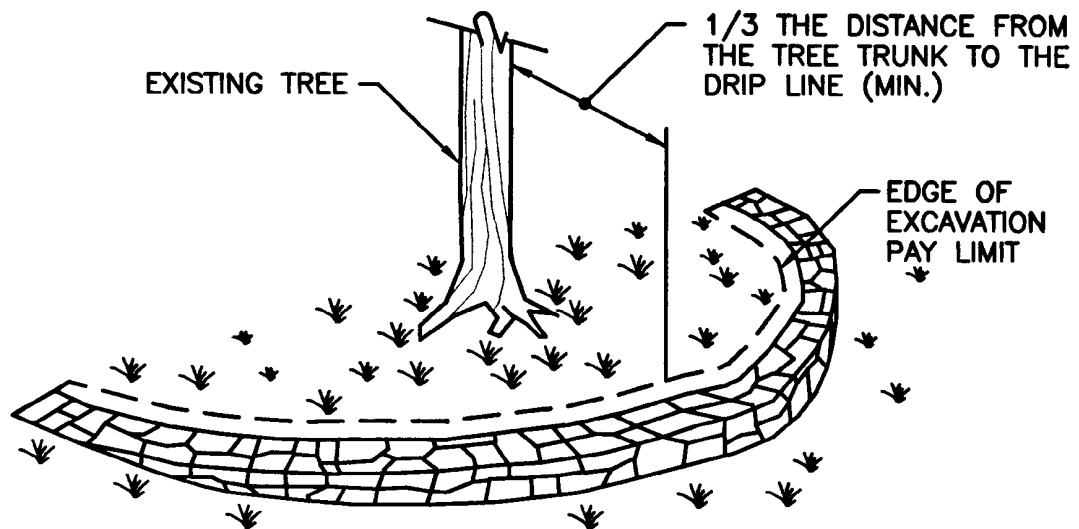
**TREE WELL**

*James H. Capaldi*  
CHIEF ENGINEER  
TRANSPORTATION

*Edmund Parker Jr.*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE







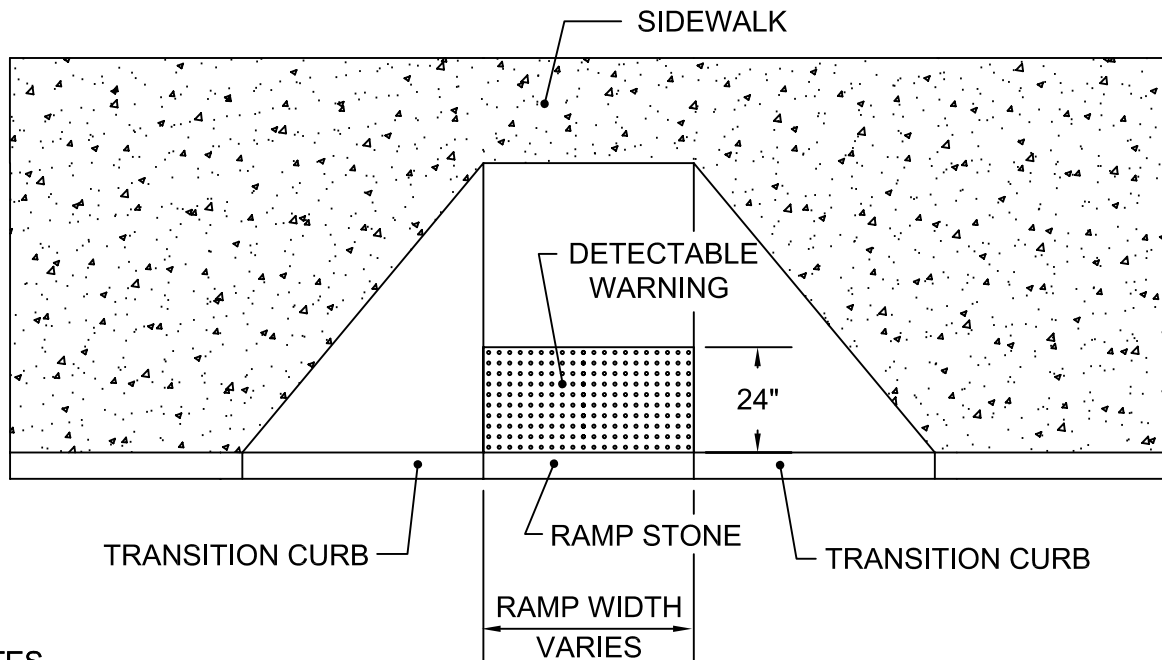
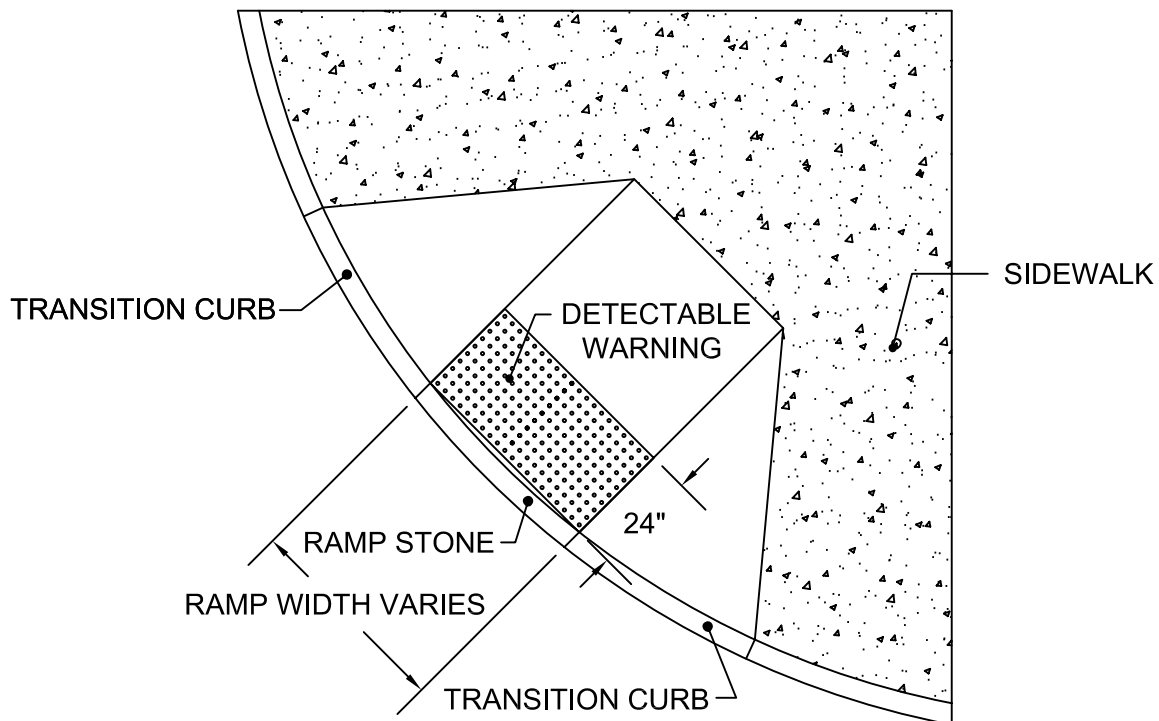
### SECTION

#### NOTES:

1. SHALL BE IN ACCORDANCE WITH SECTION L.13 OF THE R.I. STANDARD SPECIFICATIONS.
2. FOR WALL INSTALLATION DETAILS REFERENCE STD. 10.0.1.
3. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL ROOT PRUNE THE TREE. ALL ROOT PRUNING SHALL BE IN ACCORDANCE WITH SECTION L.10 OF THE R.I. STANDARD SPECIFICATIONS.

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS			TREE WALL		<div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"> R.I. STANDARD <b>51.4.0</b> </div>
NO.	BY	DATE			
			<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">   CHIEF ENGINEER TRANSPORTATION </div> <div style="text-align: center;">   CHIEF DESIGN ENGINEER TRANSPORTATION </div> <div style="text-align: center;"> JUNE 15, 1998  ISSUE DATE </div> </div>		



#### NOTES

1. DETECTABLE WARNING SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 942 OF THE RI STANDARD SPECIFICATIONS

## RHODE ISLAND DEPARTMENT OF TRANSPORTATION

REVISIONS		
NO.	BY	DATE
1	MLP	March 05

## DETECTABLE WARNING SYSTEM

*James H. Casella*  
CHIEF ENGINEER  
TRANSPORTATION

*Edward J. Pichler*  
CHIEF DESIGN ENGINEER  
TRANSPORTATION

JUNE 15, 1998  
ISSUE DATE

